‘NOTABLE NAMES IN MEDICINE AND SURGERY

MEDICAL INFORMATION SERVICE



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ADDISON'S DISEASE

ADDISON'S ANAEMIA

THOMAS ADDISON
1795–1860



Thomas Addison holds a unique place in medical history as the discoverer of two diseases both of which are named after him These two conditions are Addison s anaemia (pernicious anaemia) and Addison s disease (adrenal insufficiency usually due to tuberculosis of the adrenal glands)

Addison came of a family of Cumberland yeomen. His father was a grocer at Long Benton near Newcastle, where Thomas was born. He was intended for the law but chose medicine as a career At that time it was usual for medical students to be apprenticed to a surgeon or apothecary but Addison went straight to Edinburgh University to begin his medical studies He graduated M.D in 1815 when 23 years of age and soon afterwards decided to go to London. Although fully qualified Addison entered Guys Hospital as an ordinary student and climbing the rungs of the professional ladder eventually succeeded in obtaining a position on the honorary staff Addison became the first lecturer on cutaneous diseases [illegible] establishing the Skin Department at Guy's Hospital.

As a teacher of clinical medicine Addison was very much in his element [illegible] students feared rather than loved him, for he often appeared rude and [illegible] nevertheless they accepted as pure gospel every word he uttered One of [illegible] colleagues at Guy s was the famous Richard Bright.

Together in 1839 they published *The Elements of Practical Medicine* [illegible] contained the earliest accurate account of appendicitis—both in its [illegible] pathological aspects They wrote From numerous dissections it is [illegible] faecal abscess thus formed in the right iliac region arises in a [illegible] cases, from disease set up in the appendix caeci Addison also [illegible]

deal of attention to diseases of the lungs his writings on pneumonia w
original and of great importance

It was on 15th March 1849 that Addison read a paper before the South London Me entitled *A Remarkable Form of Anaemia* In three cases a necropsy had been performed and bilateral disease of the adrenal glands was found There was no mention at this time of p of the skin but the paper is of great historical importance for it provided the first evidenc adrenals are essential to life Rightly has it been said the whole of endocrinology dates from 15t 1849

In 1855 Addison published his famous book on *Diseases of the Adrenal G* which expanded and clarified his earlier accounts of what is now known as Addis disease This included a description of the characteristic pigmentation of the s and lips He also announced the discovery of another new disease which is n known as pernicious anaemia (syn Addison s anaemia) No cause could be fou at autopsy for this condition Addison himself states It was while investigating h Anaemia that he stumbled upon his Disease



(a)



(b)

Original plates from *Diseases of the Adrenal Glands* showing the characteristics pigmentation in Addison s disease

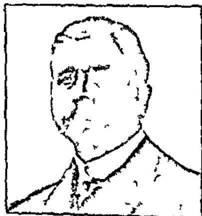


Addison s illustration of tuberculous destruction of the adrenal glands

Addison was described as of fine physique with a good head which he held erect Within the walls of Guy s Hospital he had a great reputation as a clinical teacher but as is so often the case the medical profession of the day did not perceive the genius in their midst His discoveries were appreciated abroad many years before they received any recognition in his country

Addison remained a bachelor until he was 52 years of age when he married a widow with two children Always of a very retiring nature in 1860 he developed melancholia and retired from the hospital and went to live at Brighton where he died three months later The passing of this great man was hardly noticed by the contemporary medical profession and only one paper *The Medical Times and Gazette* considered it worth while to publish an obituary notice Early in his career Addison s private practice was very small but it advanced slowly and he died worth £60 000

Addison was laid to rest in the Priory Churchyard at Lanercost Cumberland the home of his forebears The grave is situated in a quiet sequestered spot under an old yew tree surrounded by rows of tombstones erected to Addisons and Addysons of bygone times



BABINSKI'S SIGN

JOSEPH FRANCOIS FELIX BABINSKI
1857–1932

The life and work of Babinski provide a striking illustration of the fact that research need not be confined to the laboratory Many of the really great discoveries in medicine have been made by those rare spirits who possess the seeing eye and having seen demand of themselves the explanation of a phenomenon that they in common with their contemporaries and those who have gone before have witnessed time and again at the bedside or in the consulting room So it was with Babinski Extension of the great toe in lesions interfering with the pyramidal system at any point between the motor cortex and the anterior horn cells or the lumbar spinal cord had always existed but its significance was not understood until Babinski explained how it occurred

The son of Polish emigrants Joseph Babinski was born in Paris and the whole of his life was spent in France He qualified M D Paris in 1885 Babinski commenced publishing valuable papers on a variety of medical subjects when he was a medical student from 1883 until almost the end of his life he contributed three or four articles to medical journals every year

Babinski was a disciple of the great Charcot whose chief of clinic he became In 1890 Babinski was appointed Medecin des Hopitaux and soon after the death of Charcot in 1893 he became head of the neurological clinic at the Pitie one of the largest of the Paris hospitals Here he followed in the tradition of his celebrated master by holding clinical lecture demonstrations that drew a host of undergraduate and postgraduate students

Babinski first described his famous sign in 1896 It was a simple statement that the normal plantar response consists of flexion of the toes and that in certain cases

of organic disease of the central nervous system a similar stimulus evoked not a flexor but an extensor response the toes on the affected side instead of flexing when the sole is stimulated execute an extensor movement on the metatarsal Two years later he gave a full account of this phenomenon in *La Semaine des Hopitaux* a weekly journal With the passage of time little or nothing has been added to this classical description



Normal plantar reflex



Babinski s sign positive



La Pitie Paris circa 1900

Babinski made many other contributions to clinical neurology He gave a brilliant analysis of the symptoms of cerebellar disease and carried out important researches

Paul Lecene 1878–1929 Surgeon, Hopital Saint Louis Paris

on locomotor ataxia He paid much attention to the study of hysteria and was remarkably successful in handling cases of neurosis resulting from the 1914–1918 war Babinski also contributed to the progress of neurological surgery In 1911 he localised and assisted his colleague Lecene to remove the first spinal cord tumour to be operated on in France Two of his pupils de Martel and Clovis Vincent rank among the founders of modern neurosurgery and Babinski took great pride in their achievements

Babinski stood more than 6 ft in height and had a somewhat formidable presence He was slow and deliberate in his movements and was a man of few words He did not believe in snap diagnoses and his examination of patients was extremely thorough

Babinski died at his home in Paris at the age of 75 years He possessed neither the brilliance nor the striking personality neither the theatrical flair nor the fluency of his master Charcot but he was more logical and his observations were more detailed and searching

Clovis Vincent *1879–1947 Surgeon. La Pitie Paris First Professor of Neurosurgery Paris*

Thierry de Martel. 1876–1940 Surgeon to the Salpetiere Son of the Comptesse de Martel (Gyp") the well known novelist He committed suicide on the day the German army entered Paris in World War II

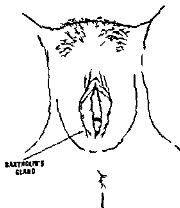


BARTHOLIN'S GLANDS

CASPAR BARTHOLIN THE YOUNGER 1655--1738

The Bartholins are one of the most celebrated medical families of all time Dr Jasper Bertelsen better known by the latinised name of Caspar Bartholinus and called the Elder, lived from 1585 1629 He married a daughter of Thomas Fincke who for 53 years was Professor and dean of the Medical Faculty at Copenhagen Five of the seven sons of Caspar Bartholin the Elder became professor in the university his daughter also founded a dynasty of doctors The most eminent of Caspar s sons is Thomas Bartholin the Elder (1616-1680) the discoverer of the human thoracic duct and the lymphatic system This Thomas was the father of Caspar the Younger

Caspar Bartholin the Younger was born in Copenhagen in 1655 He gave extraordinary proof of precocity or of inherited talent for he is said to have edited and published his father s *Dissertation on the Anatomy of Swan* in 1668 when he was only 13 years of age! At the age of 16 years he became a student of medicine and three years later while still a medical student he was appointed Professor of Philosophy For three years he travelled visiting the universities of Holland Germany France and Italy In Paris he worked under the famous anatomist Guichard Duverney and according to Bartholin s own account he and Duverney observed in the cow what are now known as the glands of Bartholin Bartholin records this curiously enough in his book on the *Anatomy of the Diaphragm* (1676) These glands had been known to exist in the human female for 50 years before Bartholin s description of them It seems therefore that Bartholin s name became attached to these glands because of his clear exposition of them in lectures and in his thesis published in 1677 rather than to any original discovery on his



Bartholin s gland

part

The glands of Bartholin (the greater vestibular glands) are situated one on each side of the vaginal orifice Each open by a duct about 2cm long into the introitus These glands are the homologues of the bulbo urethral glands in the male (Cowper s glands) and their secretions serve to lubricate the vulva The importance of these glands is simply the fact that they become infected to give rise to a Bartholin s abscess

In 1677 Bartholin settled down in his native city and having shown himself worthy of his name and heritage he received the Doctor s bonnet at the hands of his father in 1678 He lectured on medicine continued his anatomical researches and wrote several books He devised a new method of preparing anatomical specimens for dissections and preservation His last and possibly his greatest achievement was his discovery of the sublingual salivary gland and its ducts an account of which he published in 1685 The ducts are still sometimes known as the ducts of Bartholin

After 1701 he become interested in politics and devoted himself more to affairs of state than to his original profession He became Procurator General in 1719 Deputy for Finances in 1724 and for his services was decorated and ennobled in 1731 He died in 1738

Joseph Guichard Duverney 1648-1730 Professor of Anatomy Jardin du Roi, Paris



BELL'S PALSY

SIR CHARLES BELL 1774 1842

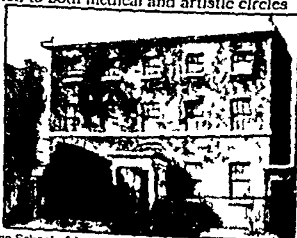
Bell s palsy the term given to facial paralysis of uncertain origin has never been given a satisfactory purely pathological designation and so today Charles Bell s name is known to members of the medical and allied profession in every country of the world In addition until recently the long thoracic nerve (the nerve to serratus anterior) so familiar to surgeons in the operation of radical mastectomy was always referred to as the nerve of Bell

Charles Bell was born in Edinburgh His father a Minister of the Church of Scotland died when Charles was five years old In later life Bell recorded that he received no education but from my mother From his mother he inherited his outstanding talent as an artist which was no less remarkable than his proficiency as an investigator While still a student of medicine at Edinburgh he published a *System of Dissections* illustrated by his own drawings

After graduating in medicine for a number of years bell helped his elder brother to conduct in Edinburgh a private school of anatomy which flourished In 1804 at the age of 30 he decided to try his fortune in London and to embark if possible on a surgical career which seemed barred to him in Edinburgh owing to his brother s unpopularity with the Faculty Installed in the Metropolis Charles bell inaugurated extramural classes for artists as well as those for medical students at the Great Windmill Street School of Anatomy (founded by William Hunter) Bell s classes were most successful—so much so that by 1812 he was able to become the sole proprietor of this school As might be expected for some time this Scottish intruder s reception

William Hunter 1718 1783 Surgeon Accoucheur The Middlesex Hospital and British Lying In Hospital, London Elder brother of the more celebrated John Hunter

by the London profession was cool but eventually Bell s unquestionable brilliance impelled his admission to both medical and artistic circles



The School of Anatomy Great Windmill Street in 1783

In 1811 Bell was discoverer of the distinct functions of motor and sensory nerves—the greatest discovery in physiology since William Harvey's demonstration of the circulation of the blood in 1628 In 1812 although 38 years of age Charles Bell achieved his great ambition and was elected surgeon to the Middlesex Hospital It is unlikely that any surgeon before or after him has been appointed to a London hospital staff for the first time so late in life Not only did Charles Bell bring fame and pupils to the Middlesex Hospital but he founded its Medical School

After the battle of Waterloo (18th June 1815) Bell went to Brussels and was placed in charge of a hospital For three successive days and nights with but scant periods of rest he was engaged in operating upon the wounded During the lull that followed he depicted numerous examples of the course the missile had taken and the anatomico pathological illustrations that he drew have never been surpassed

Bell s palsy was described by Charles Bell in the *Philosophical Transactions* of the Royal Society in 1821 In 1829 Bell published a more detailed description and corrected some mistakes in his previous account

This condition of paralysis of the facial (seventh cranial) nerve due to oedema within the bony facial canal is as mysterious in its aetiology today as in the time of Charles Bell Possibly it is viral in origin The onset is rapid and is often preceded by an aching pain lasting from a few hours to one or two days Complete paralysis

William Harvey 1578 1657 Physician, St Bartholomew s Hospital, London Physician to James I and Charles I

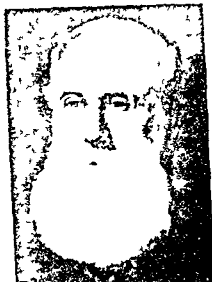
of the facial nerve rapidly takes place with equally rapid recovery within a week in many cases Seventy five per cent recover fully over several weeks but in some patients a permanent defect may result



Right-sided facial paralysis The patient has been asked to close her eyes and show her teeth

Sir Charles Bell s best known works are his treatises *On the Nerves of Respiration On the Hand The Anatomy of Expressions* and *Diseases of the Urethra* Bell s versatility and the brilliance of his discoveries in anatomy and physiology were recognised by his contemporaries He was knighted in 1831 and many other honours were bestowed upon him After thirty years of work in London Sir Charles Bell returned to his native city Edinburgh (the seat of learning which earlier in his life he was compelled to leave because of the lack of surgical opportunity accorded to him) this time to fill in 1835 the Chair of Surgery there Eight years later while in his sixty eighth year he died in harness

In spite of exceptional abilities and unceasing application to his profession Sir Charles Bell never attained affluence In part this was due to his devotion to research but mainly to his lack of business acumen for example on being elected to the Middlesex Hospital he disposed of his entire museum to the Royal College of Surgeons of Edinburgh for £3 000— surely the greatest bargain ever struck by the College in its long history Added to this he must have lived on a scale higher than his income justified, for when he died his widow was left so impecunious that she was awarded a Civil List pension of £100 per annum



BIGELOW'S EVACUATOR

BIGELOW'S Y-SHAPED LIGAMENT

HENRY JACOB BIGELOW 1818-1890

Bigelow did not invent the operation of crushing stone in the bladder neither was he the first to use an evacuator Jean Civiale had invented a lithotrite in 1824 and had successfully demonstrated that a stone could be broken into fragments by this means Several modifications were introduced soon after but all these instruments had defects Evacuators were tried but they were so inefficient that none gained popularity

Matters stood thus when Bigelow of Boston took up the problem in the seventies of the last century After several years of patient work he produced a heavy lithotrite capable of crushing larger and harder stones than before To secure removal of the fragments he devised metal catheters of large calibre to the outer end of which was attached a strong rubber bulb evacuator with a glass container below into which the fragments were received He continued to improve his instruments and his final and most successful model was completed in 1883

Bigelow was born in Boston the eldest son of Dr Jacob Bigelow an eminent physician of the city He was educated at the Boston Latin School and at Harvard University Owing to threatened pulmonary tuberculosis he was forced to abandon

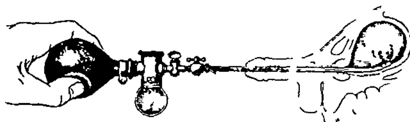
Jean Civiale 1792 1867 Created the Urological Service of the Necker Hospital Paris
Crawford Williamson Long 1815-1878 a country practitioner of Jefferson Georgia U S A was the first to employ ether narcosis He administered to anaesthetic eight times prior to 1846 but did not publish the fact
William Thomas Green Morton 1819 1868 was the first to report the use of sulphuric ether as a general anaesthetic



Old Boston in Bigelows day

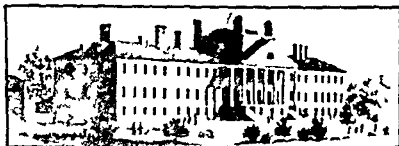
his medical studies for a time and to spend the winter of 1839 40 in Cuba In the following spring he went to France where he remained except for a short visit home in 1841 (when he took his M D degree at Harvard) until 1844

When finally he returned to Boston he soon acquired a large practice and to broaden his experience he established a charitable out patient clinic in the base ment of a church In 1846 he was appointed surgeon to the Massachusetts General Hospital where he later became Professor of Surgery in the Harvard Medical School



Bigelows Evacuator

No doubt through Bigelows influence William Morton was permitted to give ether to a patient at the Massachusetts General Hospital on 16th October 1846 The procedure was only the removal of a small lump on the side of the neck of a lad of 17 called Gilbert Abbott but this first successful use of a general anaesthetic makes that date the most important landmark in the history of anaesthesia It was Bigelow



The Massachusetts General Hospital Boston U S A in 1847

who prepared the first report on Morton s results

Bigelow made many important contributions to surgery and anatomy He was the first in America to excise the hip joint and his *Manual of Orthopaedic Surgery* (1844) was the earliest important work on the subject in his country Bigelow s name is perpetuated not only by his evacuator but by his Y shaped ilio-femoral ligament of the hip joint which he emphasised plays such an important part in reduction of a dislocation of the joint by flexion and rotation



Y shaped Ligament of Bigelow

Bigelow was a tense and epigrammatic lecturer and a clever draughtsman He was something of a martinet but was greatly respected by his associates and his students



BILLROTH GASTRECTOMY

THEODOR BILLROTH 1819 1894

Gastric surgery is little more than a century old It was on January 29th 1881 that Theodor Billroth performed the first successful partial gastrectomy with gastro-duodenal anastomosis at the Surgical University Clinic of the Allgemeine Kranken haus in Vienna Since that time the eponym Billroth gastrectomy has been firmly applied to this operation However Billroth was not the first to perform a partial gastrectomy This honour goes to Jules Pean of Paris who performed a resection of a pyloric cancer in Paris in April 1879 The patient died on the fifth post-operative day possibly as the result of an early attempt at carrying out a blood transfusion In November of the following year Ludwig Rydigler of Culm in Poland performed the second gastrectomy but his patient died only 12 hours post-operatively

The heroine of Billroth s successful gastrectomy was a lady Frau Therese Heller age 43 years Her carcinoma of the pylorus was easily palpable and was produc ing gross gastric obstruction so that she was continuously vomiting and extremely wasted Pre operative preparations included careful gastric lavage and nutrient ene mas Billroth operated aided by Anton Wolfler his 30 year-old Czech chief assistant A transverse upper abdominal incision was performed and an extensive infiltrating carcinoma of the pylorus was delivered into the wound The adjacent lymph nodes were involved but there were no distant metastases The duodenum was divided 1 5cm distal to the tumour the growth resected the edges of the lower segment of the divided stumpt of stomach were approximated and a gastro-duodenal anasto-mosis performed at the lesser curvature Billroth used 21 interrupted sutures to

Jules Pean. 1830 1898 Surgeon Paris
Ludwig Rydigler 1850 1920 Polish surgeon Performed the first successful gastrectomy for benign gastric ulcer in the same year as Billroth s operation
Anton Wolfler 1850-1917 Professor of Surgery Prague

close that part of the stomach not employed in the anastomosis and 33 interrupted sutures for the anastomosis itself silk being employed throughout The whole area of the operation was mopped out with 2 per cent carbolic solution before closing the abdominal wound The whole procedure lasted one and a half hours and was performed in complete silence The post operative course was smooth Ice was al lowed by mouth in the first 24 hours but the following day teaspoonfuls of sour milk were given There was little pain and this was readily eased with small injections of morphia The wound healed well without infection and she left hospital three weeks after the operation



The original diagrams illustrating Wolfler s account of the first Billroth gastrectomies

The excised specimen showed an extensive growth which had so narrowed the pylours that it could just admit the shaft of a feather Frau Heller continued to do well for a short time but then developed diffuse metastases in the liver and omentum

dying only four months after her historic operation

Theodor Billroth was one of the great surgical giants of all time His contributions went far beyond the first successful gastrectomy He was born in 1829 of Swedish parents on the island of Rugen in the Baltic Sea just off the mainland of what is now East Germany Later he often referred to himself as a North German herring' He was the oldest of five children and his father a deacon in the Lutheran church, died when Theodor was only five years of age At first Theodor s only inclination was to music and he wished to follow a professional career in this field However his mother insisted that he entered medical school and he qualified at the age of 23 at the University of Berlin Here he became assistant to the great Bernhard von Langenbeck then the leading surgeon in Germany and proved to be his greatest pupil In 1860 at the early age of 31 he became Professor of Surgery at Zurich before taking up his appointment as Professor in Vienna seven years later In Vienna Billroth founded one of the greatest schools of surgery carrying out pioneering work in experimental surgery surgical pathology and operative surgery In 1871 he showed that oesophagectomy was possible in the dog and his assistant Czerny performed the first cervical oesophagectomy in man In 1872 Billroth performed the first total laryngectomy He pioneered excision of bladder cancer and tumours of the bowel performed a hindquarter amputation and in all personally performed 34 resections of the stomach for cancer He founded the modern concept of reporting the total clinical experience of a department including operative mortality complications and five year follow up However, he sounded a warning note Statistics are like women he wrote mirrors of purest virtue and truth or like whores to use as one pleases

His pupils and assistants included Mikulicz who became Professor of Surgery in Breslau Gussenbauer who succeeded him to the Chair of Surgery in Vienna and von Eiselberg who was Billroth s last pupil and also became a Professor in Vienna 19 of his own assistants went on to become chiefs of surgical departments We have already mentioned Czerny and Wolfler who became Professor of Surgery in Prague and performed the first gastroenterostomy with survival

In the midst of all this professional activity Billroth had a happy home and family

Bernhard von Langenbeck 1810 1887 Professor of Surgery Berlin
Vincenz von Czerny 1842 1916 Professor of Surgery Heidelberg
Johann von Mikulicz Radecki, 1850-1905 Professor of Surgery Breslau
Karl Gussenbauer 1842 1903 Succeeded Billroth as Professor of Surgery in Vienna in 1894
Anton von Eiselberg 1860 1939 Professor of Surgery Vienna

life was an accomplished musician (an intimate friend of Brahms) and played a prominent part in Austrial politics as a member of the upper House of Parliament.

Billroth died in Abbazia on the Adriatic coast of heart failure on February 6th 1894 He was buried in the central cemetery of Vienna not far from the graves of Schubert and Beethoven and the monument of Mozart



BRIGHT'S DISEASE

RICHARD BRIGHT 1789 1858

Richard Bright is one of the few doctors whose name is almost as familiar to the lay public as to members of the medical and nursing professions

This great physician was born at Bristol on 28th September 1789 He attended private schools at Bristol and at Exeter and in 1808 entered the University of Edinburgh In 1810 he went on a visit to Iceland together with a fellow student the future Sir Henry Holland Shortly after his return Bright contributed an account of the botany and natural history of Iceland to the official history of the expedition

In 1811 he left Edinburgh to continue his medical studies at Guys Hospital London and in 1813 at the age of 24 graduated M D Edinburgh In 1814 he went on another foreign tour and on his way back in 1815 arrived at Brussels about a fortnight after the battle of Waterloo

Bright published an account of his travels in 1818 and although the book contains few medical allusions it exemplifies his wonderful powers of observation and description

In 1820 he was elected assistant physician to Guy s Hospital becoming full physician four years later The staff of Guy s at that time represented a veritable galaxy of talent including Addisons and Hodgkin and Bright was justly proud of his position For many years he spent six hours daily in the wards and post mortem room of his beloved hospital

In 1827 appeared the first volume of Bright s immortal *Reports of Medical Cases Selected with a View of Illustrating the Symptoms and Cure of Diseases by a Reference to Morbid Anatomy* The first part of these Reports deals with the most

Sir Henry Holland 1788 1873 First Baronet F R S M D Edin F P C P Physician in ordinary to Queen Victoria



Hard contracted granular kidney which was accompanied by albumious urine and anasarca (from Richard Bright's *Reports of Medical Cases* published in London 1827)

famous of Bright's discoveries that of the disease which bears his name The results of further researches on renal disease were described in lectures before the Royal College of Physicians

In 1826 nothing was known about chronic nephritis Dropsy was regarded as in itself a primary disease The connection between dropsy and urine containing albumen was not understood

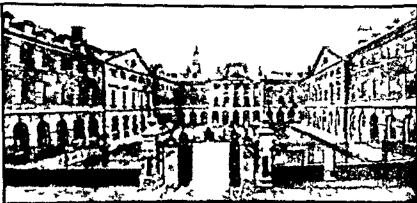
Bright's great achievements was to correlate these symptoms with the changes in the kidneys which he found at so many post mortem examinations He thus established the existence of a common disease and showed that it was in all its varied manifestations associated with a morbid conditions of the kidneys

In his own words

I have often found the dropsy connected with the secretion of albuminous urine more or less coagulable on heat I have never yet examined the body of a patient dying with dropsy attended with coagulable urine in whom some obvious derangement was not discovered in the kidneys

Even had he done no work on renal disease Bright would have been among the really famous physicians because of his other original observations which ranged over such diverse subjects as the association of diabetes and fatty stools with pancreatic disease acute yellow atrophy of th liver unilateral convulsions associated with organic disease of the central nervous system and status lymphaticus

At Guy's Hospital Bright inspired and directed the research work of younger men and was always careful to acknowledge the assistance they gave him Unlike many



Guy's Hospital in 1875

physicians devoted to pathological investigations he was successful in practice and was regarded as one of the leading consultants of his day He was not only an acute observer but possessed the much rarer mental vision and power of synthesis that results in an observer becoming a discoverer

Dr Bright was a cheerful attractive and honourable man and his greatness was recognised in his lifetime Today he takes his place among the outstanding names in the history of British medicine

He died on 16th December 1858 from heart disease and was buried at Kensal Green Up to the time of its destruction in an air raid the church of St James s Piccadilly contained a mural tablet bearing the following inscription

He contributed to medical science many discoveries and works of great value and died while in the full practice of his profession after a life of warm affection unsullied purity and great usefulness



BRODIE'S ABSCESS

SERO CYSTIC DISEASE OF BRODIE

SIR BENJAMIN BRODIE
1783-1862

Benjamin Collins Brodie was born at Winterslow Wiltshire of which village his father was Rector In 1801 at the age of 18 he came to London and joined Abernethy s School of Anatomy In the following year he transferred to the Great Windmill Street School Two years later having passed in these preliminary studies, he entered St George s Hospital as a pupil of Sir Everard Home Having been admitted a member of the Royal College of Surgeons in 1805 (at that time this diploma was obtained by passing a single examination of one hour *viva voce* in anatomy and surgery) he held the office of house surgeon to St George s Hospital for five months and then resigned to undertake teaching at the Windmill Street School and to assist Sir Everard Home in his private practice In 1808 Sir Everard Home applied to the Governors of St George s Hospital for an assistant and at the age of 24 Brodie was appointed assistant surgeon he became full surgeon in 1822 Elected a Fellow of the Royal Society in 1810 he was awarded its Copley Medal in the following year for his physiological researches In 1818 Benjamin Brodie published his book on *Diseases of Joints* He was appointed surgeon to King George IV and afterwards Sergeant Surgeon to King William IV In 1832 Brodie published an account of chronic abscess of the tibia

He pointed out that such an abscess can occur in the interior of any bone but in his experience it did

John Abernethy 1764 1831 F R S Surgeon St Bartholomew s Hospital, London His gruff manner was a byword but he enjoyed an enormous reputation as a teacher
Sir Everard Home 1756 1832 First Baronet, F R S Surgeon St George Hospital, London Pupil and brother in law of John Hunter whose manuscripts he destroyed after publishing the work as his own

so most frequently in the tibia When it occurred such an abscess gave rise to a deep seated brawny *swelling situated near a joint Another condition with which Brodie s name* is associated is sero- cystic disease of the breast because it was he who first described this rare affection in a lecture delivered at St Georges Hospital in 1840 This apparently malignant looking lesion which may even ulcerate the overlying skin *is a benign but giant fibroadenoma His name should also be attached to the test for* varicose veins attributed to Tendelenburg for Brodie described this test most lucidly in his lectures *published in 1846*



Sero-cystic disease of Brodie



St Georges Hospital Hyde Park Corner London circa 1800 The hospital was rebuilt on the same site during Sir Benjamin Brodies lifetime

Sir Benjamin Brodie was an astute clinician His observations are quoted to this day for instance in extravasation of urine he noted that a black patch on the penis was a harbinger of death Brodie became the acknowledged leader of the surgical profession in London few surgeons in any era have enjoyed a higher reputation and esteem and his fame was well deserved A tireless surgeon research worker lecturer and writer he was a man of ideals who raised the practice of surgery to a higher level In 1843 at the age of 60 he was raised to the rank of Baronet In the same year he was elected one of the original Fellows of the Royal College of Surgeons In 1858 at the age of 75 he was elected President of the Royal Society and in the same year became the first President of the newly created General Medical Council Full of years and honours Sir Benjamin Brodie died at his country house *Broome* Park Surrey on 21st October 1862



CHARCOT'S JOINTS

THE INTERMITTENT HEPATIC FEVER OF CHARCOT (Suppurative Cholangitis)

JEAN MARTIN CHARCOT

1825 1893

Jean Martin Charcot was the eldest son of a Paris coachbuilder He and his three brothers were sent to school for a year on the understanding that the boy who received the best report would be permitted to study for one of the learned professions Jean Martin was the prize winner and he selected medicine as his profession He did not qualify until he was 28 years of age but soon afterwards by private teaching he was earning enough money to pay his parents for the sacrifices they had made on his behalf

In 1862 Charcot was elected physician to the Paris hospital of Salpetriere and in course of time he created there the greatest neurological clinic of all time

His demonstrations and lectures drew post graduate students from all parts of the world These lectures were prepared with meticulous care and his style of delivering them was most dramatic Before his immense audiences he stood beside his seated patient on a floodlit theatrical stage The patient having been demonstrated and led off the stage Charcot continued to lecture and from time to time interposed his flow of wards by mimicking the various gaits tics spasms and typical postures of the neurological diseases he was describing His learning quite apart from his mastery of medicine was immense he read ancient and modern languages with ease and his lectures were enriched by apt quotations from the classics as well as those of modern writers on a kaleidoscopic variety of subjects

Among his many lectures and papers can be found first descriptions of intermittent claudication disseminated sclerosis amyotrophic lateral sclerosis the lightning pains of tabes dorsalis and peroneal muscular atrophy He described the intermittent hepatic fever that bears his name which comprises a triad of

fluctuating jaundice pain and intermittent fever with rigors characteristic of the cholangitis associated with a gal stone impacted in the common bile duct He described the peculiar neuropathic joints characterised by gross disorganisation deformity swelling crepitus and hyper mobility yet with complete absence of pain resulting from sensory loss in the affected limb In Charcot s day this was usually the result of tabes dorsalis the syphilitic destruction of the dorsal columns of the spinal cord As this disease has become increasingly rare the majority of cases of Charcot s joints are now due to syringomyelia and peripheral neuropathy of which diabetes is the commonest cause in this country Charcot presented some of the earliest specimens of this condition to pathological museums in England and it is interesting that it was the medical profession in this country who first used the term Charcot s joints



Charcot s osteo arthrosis of left knee

In person Charcot bore a strong resemblance to Napoleon and there was something Napoleonic about his method of instruction While he was indulgent to poor patients his sarcasm was sometimes ferocious and he brooked no contradiction

He was an indefatigable worker when he was following up an interesting problem he gave no thought to food or sleep He was careless of money and often forgot to take his fees but there was little need for him to worry about money matters for he had married an heiress and lived in great style His sumptuous house and garden in the Boulevard Saint Germain were the scene of lavish entertainments Charcot

loved music and painting and was himself a talented artist He was fond of animals and kept two pet monkeys

Charcot died suddenly from coronary thrombosis when he was in his sixty ninth year A statue of his memory stands in front of the Salpetriere



CHEYNE-STOKES RESPIRATION

JOHN CHEYNE 1777-1836



WILLIAM STOKES 1804-1878

Fifteen years after Cheyne had retired from practice and twentyeight years after Cheyne had published his description of this form of respiration in the *Dublin Hospital Reports* Stokes recorded an account of an example of his own and quoted Cheyne Stokes added nothing to his senior fellow countryman s word picture of the phenomenon Why then should Stokes name be linked inseparably with that of Cheyne for so it is and so it will remain? Having read this short account it is probable that the reader will be able to guess and the reader s guess will be as good as any medical historian s explanation Every senior medical student every physician and every surgeon throughout the world knows of Cheyne-Stokes

respiration It is an sign of such grave omen that much more often than not it proves to be a harbinger of death Its principal causes are an intra-cranial haemorrhage both apoplectic and traumatic advanced renal failure left ventricular failure and in narcotic poisoning By the time of phenomenon appears the patient is in coma Recorded graphically by a suitable modern instrument the respirations show the following unmistakable picture



Is not Cheyne s word picture of what he observed equally accurate and convincing?

For several days his breathing was irregular it would entirely cease for a quarter of a minute then it would become perceptible though very slow then by degrees it became heaving and quick and then it would gradually cease again this revolution in the state of his breathing occupied about a minute during which there were about thirty acts of respiration

John Cheyne, the son of a general practitioner of Leith was born at this port of Edinburgh He attended school near his home and later one in Edinburgh but he was a backward boy who took more interest in accompanying his father on his rounds than in being taught at school At the age of 16 he was apprenticed to his father and so he remained until 1792 when at the age of 25 he enrolled as a student at the University of Edinburgh By dint of much coaching he succeeded in passing the M D examination three years later Having qualified he decided to enter the army as a surgeon and served for four years in various parts of England and Ireland On leaving the army he was placed in charge of the Ordance Hospital at Leith Fort where the duties were so light that he was able to assist in his father s practice At the same time he attended Charles (later Sir Charles) Bell s classes in Edinburgh and during the ensuing nine years he made a special study of diseases of childern and published several books on his subject Suddenly in 1809 he decided to practise in Dublin and after two years he was appointed Physician to the Meath Hospital He was the first Professor of Medicine at the Royal College of Surgeons in Ireland (1813) in which Chair he was succeeded (1828) by Whitley

Stokes father of William Stokes In 1820 he was made Physician General to the Forces in Ireland Ill health caused his retirement in 1831 He went to live at Sherrington in Buckinghamshire where he died

William Stokes was one of the greatest teachers of clinical medicine who has ever lived He and his colleague Robert Graves were among the most famous members of the Dublin School of all time William Stokes was the son of Whitley Stokes Young Stokes studied at first under his father and later at Glasgow and at Edinburgh and he proved to be exceptionally brilliant In 1825 while still a medical student he wrote a classic on the use of the stethoscope This was the first book on the subject in English since the instrument had been introduced by Laennec in 1819 Stokes graduated M D Edinburgh in 1825 and in the following year he was elected Physician to the Meath Hospital in the place of his father who resigned He succeeded his father as Regius Professor of Physics in 1840 His particular interests were diseases of the heart and chest upon which he wrote books that gave him a world wide reputation To Stokes was due the institution in Dublin University of a Diplom in Public Health the first in the British Isles soon to be followed by one at Oxford and another at Cambridge William Stokes died in Dublin at the age of 74

Whitley Stokes 1763 1845 Regius Professor of Physic in the University of Dublin
Rane Teophile Hyacinthe Laennec 1781 1826 M D Paris Physician, Hospital Necker Paris Invented the stethoscope in 1819 Died of pulmonary tuberculosis



THE LYMPH-NODE OF CLOQUET

BARON
JULES
GERMAIN
CLOQUET
1790-1883

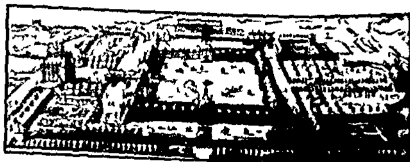
Jules Germain Cloquet was born in Paris His father had occupied the important post of inspector general of the commercial ports of French Morocco With the coming of the Revolution he lost this post but being a good artist he was able to earn a moderate income by teaching art Jules and his elder brother *Hippolyte (who* was also to become a famous anatomist) were educated at an excellent college in Paris At the age of 16 Jules entered the school of anatomy at Rouen and he studied there for about two years Because his father s straitened circumstances prevented him from taking the full course Jules decided on an army medical career for at that time students at the Val-de Grace Army Medical School in Paris were educated at the expense of the Republic As subsequent events proved perhaps it



was fortunate that owing to a breakdown in health Cloquet had to abandon the idea of pursuing a military career After some months convalescence he was able

to resume his medical studies at the University of Paris and his inherited talent for drawing and modelling led to his being appointed, at the age of 22 constructor of anatomical models at the school of anatomy Three years later he was appointed prosector and by this time his teaching ability and the readiness with which he was able to illustrate his lectures by blackboard drawings attracted many pupils As an impecunious student the Faculty allowed him to take his M D examination in 1817 without paying the customary fees The thesis he submitted was entitled *Recherches Anatomiques sur less Hernies de l Abdomen* and was based on dissections of no less than 340 cases of hernia Two years later he published a book on the causes and the anatomy of herniae to which authors on this subject referred for generations to come In this book Colquet describes the lymph node that bears his name enlargement of which simulates the swelling produced by an irreducible femoral hernia His description of this lymph node is as follows

The upper surface of the Septum Crurale is always perforated by small apertures for the passage of lymphatics and which are sometimes so numerous that the superior part of the canal appears to be closed simply by a fibro cellular net work One of these apertures more considerable than the others is central and is sometimes occupied by an elongated absorbent gland It is sufficiently large to admit the point of the little finger which when introduced will be girt by it as by an elastic fibrous ring



The old Hospital St Louis Paris

Between 1821 and 1830 Cloquet s *Anatomie de l Homme* appeared in five volumes illustrated by 1 300 figures more than half of which were drawn by the author

In 1819 Cloquet was elected surgeon to the Hospital St Louis and soon afterwards he inaugurated an entirely new system whereby the student himself examined the patient and recorded his findings which followed his notes of the

patient s history Cloquet s classes became thronged with students In 1831 Cloquet was made Professor of Surgical Pathology in the University of Paris and he held this Chair for 27 years

He was an excellent operator and invented several surgical instruments In 1829 he carried out successfully amputation of the breast in a patient who had been placed under the influence of hypnosis this was 17 years before the introduction of inhalation anaesthesia

In 1840 at the age of 50 his health again gave cause for anxiety and he toured Southern France and Corsica with his friend Gustave Flaubert the famous novelist, who was the son of Achille Cleophas Flaubert, his teacher of anatomy at Rouen After some months Cloquet was able to resume his work His fame as a surgeon and a teacher spread at home and abroad and he was appointed surgeon to Nepoleon III and was created a Baron

With advancing years Baron Cloquet spent long period at his farm in Provence where he occupied himself growing rare plants Cloquet had always been delicate and he often said that his life was hanging by a thread In spite of these gloomy forebodings he lived to the age of 93 and for his last 20 years as President of the Academy of Medicine was acclaimed both at home and abroad as the doyen of the surgeons of France

Achille Celophas Flaubert, 1784 1846 Professorof Anatomy Rouen
Gustave Flaubert, 1821 1880 Famous novelist madame Bovary is among his best known works



COLLES' FRACTURE COLLES' FASCIA

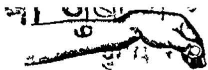
ABRAHAM COLLES 1773-1843

Abraham Colles was born at Milmount near Kilkenny where his father owned a large marble quarry During his attendance at Kilkenny Grammar School a flood swept away part of the house of a local doctor and carried a book on anatomy into a field near Colles home The boy picked up the book and returned it to Dr Butler who noticing the youngster s interest in the book made him a present of it It is belived that this incident influenced young Colles in the choice of a profession

Colles entered Dublin University in 1790 and at the same time became apprenticed to Philip Woodroffe In 1795 Colles obtained the diploma of Licentiate of the Royal College of Surgeons in Ireland Soon afterwards he went ot Edinburgh for further study At Edinburgh he worked so hard as to cause his landlady repeatedly to exhort him to take more rest lest he should read himself into his coffin In 1797 he obtained the degree of M D Edinburgh Soon afterwards he is said to have walked to London—a distance of 400 miles—at the rate of fifty miles a day! He visited the london hospital and assisted Sir Astley Cooper then a young man in making dissections to illustrate the latter s epoch making book on hernia

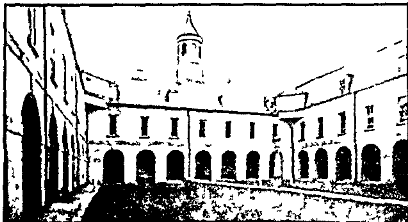
Returning to Dublin in 1797 Colles practised at first as a physician but soon devoted himself to surgery and in 1799 he was elected to the staff of Dr Steeven s Hospital Dublin Abraham Colles served this hospital as surgeon for 42 years Colles early became masterly operator being cool and dexterous and singularly resourceful In 1802 he was elected President of the Royal College of Surgeons in

Philip Woodroff Died 1799 Date of birth unknown Surgeon Dr Steevens Hospital Dublin



Colles Fracture showing the dinner fork deformity
(from a nineteenth-century text book)

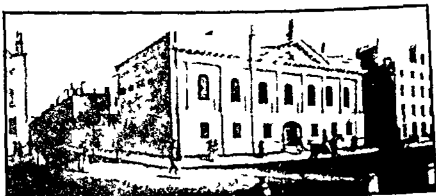
Ireland when he was only 28 years of age In 1804 he was appointed Professor of Anatomy Physiology and Surgery at the Royal College of Surgeons in Ireland and he soon became known as an inspiring teacher In Colles day the Royal College of Surgeons in Ireland attracted more students than any medical school in Great Britain Colles own audience often numbered more than three hundred



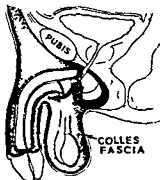
Dr Steevens s Hospital Dublin

His name became a household word in surgery following a paper of Fracture of the Lower End of the Radius which was published in the *Edinburgh Medical and Surgical Journal* in 1814 In three and a half pages he described that injury which is now known as Colles fracture His conclusions which were based entirely on what could be ascertained by inspection and palpation remain a monument of accuracy

Colles has another claim to a place in posterity In his *Surgical anatomy* (1801) he described what was called subsequently *Colles fascia* which is known to every surgeon as the fascia that determines the path by which urine extravasates in case of rupture of the bulbous urethra Colles was the first surgeon to tie the innominate artery successfully He ligatured the subclavian artery in its continuity in 1811



The Royal College of Surgeons in Ireland as it was in Colles time 1828



Traumatic rupture of the bulbous urethra with extravasation of urine

when the operation had only twice been attempted in England and never in Ireland

As a man Colles was generous and modest he was offered a baronetcy in 1839 but declined it Colles died on 6th December 1843 He had a family of six sons and four daughters His eldest son became a noted surgeon and was President of the Royal College of Surgeons in Ireland in 1863

Sir Astley Cooper 1768 1841 Surgeon Guy s Hospital London

Richard Steevens 1654 1710 Regius Professor of Physic Dublin University (Trinity College) A bachelor he bequeathed his estate to his twin sister for her life time after which the money was to build a hospital, which in fact, was opened in 1733



CORRIGAN'S PULSE

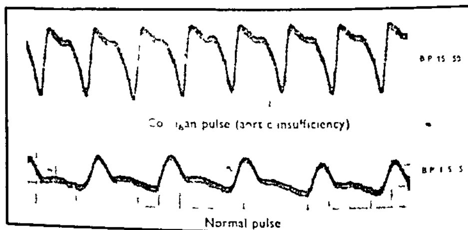
SIR DOMINIC JOHN CORRIGAN 1802-1880

Dominic John Corrigan was born in Dublin the son of John Corrigan a prosperous retailer of agricultural implements Mrs Corrigan was a lady of great beauty and talent Dominic received an excellent general education at St Patrick s College Maynooth a small town situated about 15 miles from Dublin He was good at languages and distinguished himself in science On leaving school he was apprenticed to Dr O Kelly of Maynooth who was also the physician to Dominic s school The lad showed such promise that Dr O Kelly recommended that he should be sent to Edinburgh University To this his parents agreed and Corrigan graduated M D Edinburgh at the age of 23

After graduation being determined to become a physician he returned to his native city and started in practice Patients however were few and far between and to occupy his time Corrigan wrote a small book on the lives of physicians At length his opportunity came for a vacancy occured on the staff of the Jervis Street Hospital but the successful applicant had to contribute a very large sum to the hospital funds No doubt helped by his father the money being forthcoming Corrigan was ceded six beds Almost simultaneously appeared Corrigan s famous article in the *Edinburgh Medical and Surgical Journal* (1832) entitled On Permanent Patency of the Mouth of the Aorta or Inadequacy of the Aortic Valves from which the following is a short extract

> When a patient affected by the disease is stripped the arterial trunks of the head neck and superior extermities immediately catch the eye by their singular pulsation At each diastole the subclavain carotid temporal brachial and in some cases even the palmar arteries are suddenly thrown from their bed bounding up under the skin

Never before had this clinical picture been painted although Thomas Hodgkin had drawn attention to the post mortem appearances of the condition This vivid pen picture almost immediately made the Corrigan pulse known in England France and many other countries


Corrigan pulse (aortic insufficiency)

Normal pulse

Corrigan s pulse is often and aptly likened to a water hammer—a now forgotten toy in which water imprisoned in a vaccum falls with a thud at every turn of the tube This was not Corrigan s contribution Corrigan referred to what can be seen of the pulses of a patient with aortic regurgitation as opposed to what can be felt

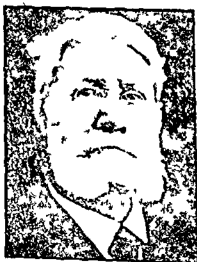
Corrigan who was an excellent teacher lectured on medicine in two of the several private medical schools then existing in Dublin In course of time he became Dublin s most popular physician patients thronged his consulting room and it is alleged that he had a secret door built in his house in order to escape from the endless stream of those who wished to consult him Eloquent in the lecture room he was an astute and practical physician rather than one with profound pathological knowledge Called to see a nobleman s wife who was dangerously ill Dr Corrigan was requested to visit the patient as often as he considered necessary On the third visit although there appeared no visible change in the patient s condition he immediately pronounced that the patient was better On leaving the house the anxious husband enquired How did you know at a glance that my wife was better? Corrigan replied I saw the top of a looking glass peeping from beneath her pillow The patient recovered

For an unfathomable reason at the age of 41 Corrigan presented himself as a candidate for the examination for the M R C S England At the *viva voce* the examining surgeon asked him Are you the author of Corrigan s pulse? On receiving

a reply in the affirmative Corrigan was shaken by the hand and was awarded the diploma without further interrogation On another occasion Corrigan, who was very fond of foreign travel attended a ward round at the Hotel Dieu in Paris In the allotted space upon the bedboard of one of the patients that the class visited was inscribed Maladie de Corrigan Do you know Corrigan of Dublin? asked the physician in charge C est moi Monsieur was the prompt reply After demonstrating this patient the physician in charge requested the class to follow him into the lecture theatre where he introduced his distinguished guest to the students amid loud acclamation Corrigan was not elected an Honorary Fellow of the Irish College of Physicians until he was 52 years of age (1854)

Corrigan s unmitigated success in every project he undertook was not upheld when he was returned Member of Parliament for Dublin Indeed he was described as a failure at Westminster Apart from his first paper he has left no other work of note but his eloquence is remembered to this day by one passage of his Presidential Address to the British Medical Association meeting in Dublin in 1867 Among the bonds the unite members of our profession none are stronger than those that cause us to soar above all sectarian discord we know no differences of race creed or colour Every man is our neighbour

In the year previous to this oration he had been created a Baronet and in 1870 he was appointed Physician in-ordinary to Queen Victoria in Ireland In his later years Sir Dominic Suffered from gout and a high blood pressure and he died suddenly following a masive cerebral haemorrhage



COURVOISIER'S LAW

LUDWIG COURVOISIER
1843 1918

Courvoisier s law states If in the presence of jaundice the gall bladder is palpable then the jaundice is unlikely to be due to stone This is an extremely useful rule providing it is enunciated correctly The principle on which it is based is that if the obstruction is due to stone the gall bladder is usually thickned and fibrotic and therefore does not distend Moreover the obstruction is usually incomplete and so some bile is able to escape from the biliary system Obstruction of the common bile duct due to other causes of which the commonest is carcinoma of the head of the pancreas is usually associated with a normal gall bladder which can dilate Note that the law is not phrased the other way round— if the gall bladder is *not* palpable the jaundice is due to stone —since 50 per cent of dilated gall bladders cannot be palpated on clinical examination due either to the patient s obesity or because of overlap by the liver which itself is usually enlarged as a result of bile engorgement

This law was first put forward by Courvoisier in his book on *The Pathology and Surgery of the Gall Bladder* published at Leipzig in 1890 it was a work based on over 450 personal operations on the gall bladder and bile pasages

Ludwig Courvoiser was born at Basle Switzerland His father was a merchant and his mother was the daughter of an English clergyman At the age of seven he went with his parents to Malta the reasons being that his father developed pulmonary tuberculosis and his maternal grandparents lived there Thus he acquired an excellent knowledge of English As a boy he was extermely found of natural history and spent much of his apre time in botanising and hunting butterlies As he was



Patient with advanced obstructive jaundice due to carcinoma of the head of the pancreas The gall bladder is enlarged



The Old Burgerspital Basle

about to enter the university as a medical student Courvoisier was stricken with typhus and was so ill that he could not commence his studies for over a year When he did enrol he soon overtook his contemporaries and won many prizes His final undergraduate years were spent at the University of Gottingen and the returned to his native city to graduate M D Basle in 1868 Soon afterwards at the age of

25 he was chosen by professor Socin to act as his assistant Socin was one of the first Continental surgeons to adopt the antiseptic method At the end of his assistantship Courvoisier visited London and studied under Sir William Fergusson and Sir Spencer Wells He then spend a year in Vienna where he followed the work of Billroth and Czerny To the end of his long life he spoke with affection and gratitude of these great men and especially of his teacher Socin

During the Franco Prussian war Courvoisier served in a military hospital at Karlsruhe After the war he returned to Basle and soon afterwards he was elected surgeon to a hospital in Riehen a small town about five miles north east of Basle on the German Swiss border For 30 years this was the scene of his labours His reputation as a surgeon spread far and wide and within 10 years of his commencing practice of Riehen he was admitted as a recognised teacher of surgery in the University of Basle While still only on the staff of the small hospital at Riehen he went to reside in basle in 1883 and started a private clinic there which was most successful In 1888 the university recognised his work and accorded him the title of Profesor of Surgery Extraordinary It was not until the death of Socin in 1899 when Courvoisier was 57 years of age that he was allotted any hospital beds in Basle and shortly afterward he was elected Professor of Surgery in the University

Courvoisier s most important work was concerned with the biliary tract and he was the virtual founder of this brench of surgery It was he who popularised the operation of cholecystectomy and he was one of the first to remove a stone from the common bile duct These accomplishments gave him an international reputation

A safe rather than a brilliant operator he gladly handed over the case to other when confronted with conditions lying outside his experience Courvoisier never abandoned his boyhood s love of flowers and butterflies and in addition to his surgical writings he published 21 papers on entomology He bequeathed his great herbarium to the Botanical Institute and his collection of butterflies to the Natural History Museum of Basle

Courvoisier died at the age of 75 and is rightly regarded as the first of a line of famous abdominal surgeons of Basle

August Socin, 1839 1899 Professor of Surgery Basle
Vincenz Czerny 1842 1916 Sometime first assistant to Professor Billroth, and later Professor of Surgery at Heidelberg



MILLICURIE (mC)

MICROCURIE (μ C)

MARIE
CURIE
1867-1934

The unit of radio activity is the curie A curie is too large a unit for purposes of treatment by an isotope consequently such doses are expressed in millicuries (mCi) or microcuries (μCi) these being a thousandth and a millionth part of a curie respectively

The curie is so named in honour of Pierre and Marie Curie

Marie Sklodowska was a Pole She was born in Warsaw the youngest child of a family of five Her father was a teacher of mathematics and physics and had a hard struggle to keep together a home on his slender stipend When Marie was nine her mother died and this tragedy no doubt helped to develop that wonderful power of overcoming difficulties that characterised Marie Sklodowska s whole life

At the age of 17 Marie became governess to a landed gentleman s children She held this post for five years but all the time she longed to study science a bent which she must have inherited from her father

Out of her salary she saved enough to take her to Paris where she enrolled as a student Her funds were so inadequate that she suffered great hardships living in an attic without proper food or fuel She worked at the university during the day and studied in her attic far into the night preparing for examinations at which she was brilliantly successful

Then she met Pierre Curie A year later (1895) they married and Marie worked



in her husband s laboratory Thus began the partnership which has so enriched the world



Stamp commemorating the 40th anniversary of the discovery of radium

About this time Becquerel noted that the salts of the metal uranium emitted rays The Curies became interested in this subject They procured some uranium and began experimenting in an old shed which they had converted into a primitive laboratory Two years later they announced the discovery of two new elements—radium and polonium—which they had isolated from mineral pitchblendes Polonium was so named by Madame Curie in commemoration of her native Poland

Recognition and honours now came to the Curies In 1903 the Nobel Prize in physics was awarded to them jointly with Becquerel (in 1911 she was to receive the Nobel Prize for a second time on this occasion alone) At the very moment when the fame of the two scientists and benefactors was spreading throughout the world a tragic accident robbed Madame Curie of her wonderful companion Pierre Curie was run over in a Paris street and killed Madame Curie never completely recovered from this blow though she continued to develop the science they had created together with unprecedented brilliance

She succeeded her husband as Professor of Physics at the university and was the first woman to hold such a position there At her inaugural lecture she resumed the course at the precise sentence where Pierre Curie had left it The University of Paris created a Radium Institute and placed Madame Curie at the head of the research department This she directed until a few weeks before her death

Pierre Curie (1859 1906) was at this time 35 years of age and was Chief of the Laboratory at the School of Physics and Chemistry of the City of Paris
Antoine Henri Becquerel 1852 1908 Professor of Physics at the Ecole Polytechnique Paris



Madame Curie in her laboratory

In 1921 she visited the United States to receive a gramme of radium presented to her by the President In 1929 she paid a second visit to the New World this time to accept a cheque for 50 000 dollars subscribed by American funds This sum of money she gave to her native city of Warsaw for the promotion of research in radium

Madame Curie died of aplastic anaemia at the age of 66 years There is little doubt that the long exposure to radiation caused this fell disease that hastened her end The Curies had two daughters Irene and Eve Before she died Madame Curie had the happiness of seeing her work continued by Irene and her husband M Joliot

Jean Frederic Joliot Curie 1900 1958 Physicist Professor at the College de France High Commissioner for Atomic Energy in France 1945 1950

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CUSHING'S SYNDROME

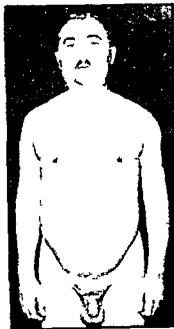
HARVEY WILLIAMS CUSHING 1869 1939

Those who believe that surgeons should be painlessly put down at the age of 60 might reflect that Harvey Cushing's important contribution was made when he was in his 63rd year!

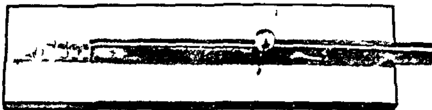
We now know that the clinical manifestations of the syndrome result from excessive production of cortisol by the adrenal cortex The majority of cases result from hyperplasia of the adrenal cortex but about 10 per cent are due to benign or maliganant cortical tumours or rarely a basophil adenoma of the pituitary Many examples of the syndrome nowadays are iatrogenic resulting from the therapeutic administration of steroids

Cushing had been interested in diseases of the pituitary for most of his professional life and in 1912 published a monograph *The pituitary Body and its Disorders* with 47 carefully documented cases One at least of these was a typical example of this syndrome Over the years he observed a number of such cases which eh vaguely labelled polyglandular syndrome Since they did not develop visual difficulty or sign of increased intra cranial pressure they were seldom subjected to operation and none had come to post mortem examination so it was not until 1932 that he was able to describe the association of a basophilic tumour of the pituitary with this clinical syndrome

The clinical features are most striking The syndeome usually affects young adults females more than males there is adiposity with central distribution abdominal striae a red moon face and diabetes There may be osteoporosis leading



Cushing's syndrome Note the typical moon face



Caushing's clips

to vertebral collapse

Other features are hypertension hirsutism and acne with amenorrhoea in the female or impotence in the male

Harvey Cushing one of the founders of modern neurosurgery was born in Cleveland Ohio His father was Professor of Obstetrics and his grandfather and great grandfather had also been doctors He graduated in medicine at Harvard University in 1895 and after internship in Boston went to the John Hopkins Hospital in Baltimore as assistant to William Halsted It was at this time that he came under the influence of William Osler whose biography he was eventually to write in 1925 and for which eh was awarded the Pulitzer Prize



Cushing with Sir Charles Sherrington the distinguished neuro-physiologist at the Royal College of Surgeons

In Baltimore Cushing gradually concentrated his interests on the surgery of the brain and specialised entirely in this from 1902 onwards In 1912 he became Professor of Surgery in the Harvard Medical School in Boston and over the next 20 years at the Peter Bent Brigham Hospital he established a school of neurosurgery whose disciples spread throughout the world At the end of his career, he was operating on some 200 brain tumours annually

As a surgeon he was a perfectionist He worked slowly and in complete silience a craniotomy might take up to six hours He devised many of the techniques still in standard neurosurgical use today These included the use of suction to maintain a clear field the application of the electro cautery devised by Bovie and the use of silver clips which now bear his name to clip cerebral vessels

During World War I he served in an Americal unit as a neurosurgeon before his country entered the War He then returned to France in 1917 as an army neurosurgeon becoming senior consultant in neurosurgery to the Americal Expeditionary Force For his services to the British army he was made a military Companion of the Bath in 1919

He was a prolific writer In addition to the books already mentioned he wrote monographs on acoustic tumours on meningiomas and on classification of gliomas In 1932 he published a report on 2000 consecutive intra cranial tumours He was also a medical historian and published a biobibliography of Vesalius In all he wrote 13 books and over 300 articles He was a skilled draftsman and many of his contributions were illustrated with his own magnificent drawings

Cushing retired from active neurosurgical practice in 1932 the year that he documented his syndrome and returned to Yale as Professor of Neurology In the last two years of his life failing health made him resign from this appointment and he died of a coronary thrombosis on the 7th October 1939

William S Halsted, 1852 1922 Surgeon at the Johns Hopkins Hospital Baltimore Carried out pioneer work on the use of cocaine in local anaesthesia and popularised radial mastectomy In the USA this is referred to as the Halsted operation
William Osler 1849 1919 Canadian by birth, Successively Professor of Med'cine in Philadelphia, Baltimore and Oxford

DOVER'S POWDER

THOMAS DOVER 1660-1742



Thomas Dover rescues Alexander Selkirk from the island of Juan Fernandez This was during Dover s career as a pirate

Dover s Powder is a diaphoretic and sedative containing 10 per cent each of opium and ipecacuanha the bulk of the powder being made up by lactose There is nothing in this official text book definition to suggest the romantic story attached to this famous remedy which has been prescribed in feverish conditions for over two hundered years

Thomas Sydenham 1624 1689 His fame rests on his accounts of gout, scarlet fever measles and the malarial fevers of his time He had no hospital appointment

Dover s Powder was the invention of Captain Thomas Dover bachelor of medicine sometime pirate on the Spanish Main and one of the most amazing figures in medical history Dover was born in Warwickshire about 1660 He took his M B degree at Cambridge and shortly afterwards became a resident pupil of the famous Dr Thomas Sydenham in London Soon after moving to London the newly qualified Dr Dover contracted smallpox and he has left an interesting description of the treatment he received at the hands of Dr Sydenham

In the beginning I lost twenty two ounces of blood He gave me a vomit but I find by experience purging much better I went abroad by his direction till I was blind and then took to my bed I had no fire allowed in my room my windows were constantly open my bed clothes were order d to be laid no higher than my waist He made me take twelve bottles of small beer acidulated with sprit of vitriol every twenty four hours

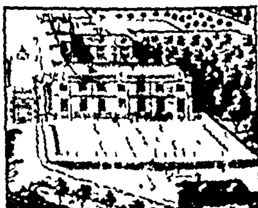
In later life Dover was very proud of his association with Sydenham and he makes frequent reference to his old master in his writings



Statue of Alexander Selkirk at Lower Largo Fifeshire

Presently Dover started practice in Bristol and achieved distinction as the first medical man to give free attendance on the sick poor of the city In 1696 he showed great zeal and courage during an epidemic of spotted fever In 1708 having amassed

sufficient capital he became a partner in a privateering expedition to the South Seas at a time when the plundering of Spanish ships and colonies was regarded as the rightful prerogative of Englishmen



Stanway House Gloucestershire Thomas Dover s last residence (Bodlein Library Oxford)

In addition to acting as the ship s doctor Dover took his full share in the fighting and led a successful attack on the city of Guayaquil in Ecuador The most noted event of the expedition took place on 2nd February 1709 when Dover rescued from the island of Juan Fernandez off the cost of Chile a ship wrecked for over four years The adventurers returned to England in 1711 with booty to the value of £170 000 and what is more important to us brought back Alexander Selkirk. Captain Woodes Rogers the commander of the ship in which Dover sailed published a full account of the expedition in a book entitled *A Cruising Voyage Round the World* and it was upon the story of Alexander Selkirk as related therein that Daniel Defoe based the immortal story of Robinson *Crusoe*

Resuming medical practice Dover was admitted a Licentiate of the College of Physicians in 1721 and settled in London still retaining however many of his piratical ways In 1732 he published a book *The Ancient Physican s Legacy to his Country* in which he gave a long recital of marvellous cures all attesting his superlative skill in physic and made a violent attack on the apothecaries the general

practitioners of that day

It was in this book that Dover gave the formula of his famous powder

Take Opium one ounce Salt Petre and Tartar vitriolated each four ounces Ipecacuanha one ounce Put the Salt Petre and Tartar into a red hot mortar stirring them with a spoon until they have done flaming Then powder them very fine after that slice in your opium grind them to a powder and then mix the other powders with these Dose from forty to sixty or seventy grains in a glass of white wine Posset going to bed covering up warm and drinking a quart or three pints of the Posset—Drink while sweating

The story of Thomas Dover reads like one of Smollett s novels but he was no mere swash buckler and it was not entirely due to his gift for self- advertisement that his fame as a physician spread throughout Europe His powder still essntially of the same composition maintains its place in the pharmacopoela of nearly every country in the world but it will be for future historians to decide who is the more worthy of immortality the physician who gave us the powder or the pirate who gave us *Robinson Crusoe*

A few months before he died Thomas Dover retired to his country seat Stanway House near the place of his birth in the Costswold Hills

Posset = An old fashioned remedy for colds consisting of hot milk to which was added various ingredients often alcoholic which made the milk curdle
Woodes Rogers Died in 1732 the date of his birth is unknown Sea captain and later Governor of the Bahamas
Daniel Defoe 1661 1731 Prolific novelist He wrote Robinson Crusoe when he was nearly 60 years of age

Tobias Smollett, (1721 1771) British novelist whose main themes are the depletion of wandering rogues and low life in London



DUPUYTREN'S CONTRACTURE

BARON GUILLAUME DUPUYTREN 1777-1835

Dupuytren s rise from poverty to be the leading surgeon of France a baron of the Empire and a millionaire is an enthralling story

Guillaume Dupuytren was born in Pierre Buffiere a small town in central France the son of an advocate of very limited means So attractive was he as a small boy that a rich lady of Toulouse is said to have kidnapped him He was however restored to his family and was taken to Paris to be educated at the cost of a cavalry officer who had taken a fancy to him

His early struggles in Paris as a medical student were almost unbelievably hard At one time he lived for six weeks on bread and cheese and was forced to use the fat of the subjects in the dissecting room to make oil for his lamp His determination to surmount all obstacles won through In 1802 at the age of 25 he was elected to the surgical staff of the Hotel Dieu and in the following years his small book *Propositions sur quelques points d anatomie* was published Eleven years later he was appointed surgeon in chief that high office with its unrivalled opportunities for operating and for teaching upon which he had set his heart

At this venerable hospital Dupuytren toiled for over 30 years His energy was superabundant he would pay his first visit to the hospital at six in the morning and a second at seven in the evening to see the patients upon whom he had operated that day and others whose condition was giving rise to anxiety He was a wonderful clinical teacher and his lectures kept countless audiences spellbound At the same time his consulting practice became immense and it is said that he saw about 10 000 private patients annually

As an operator he had the utmost self-control and in an emergency it was said of

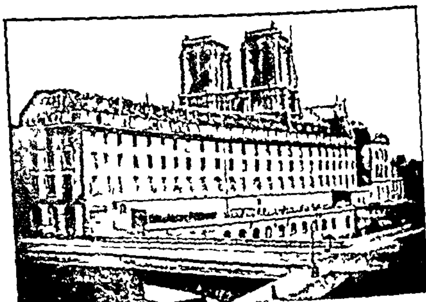
him Dupuytren was more than a man he was the god of surgery Dupuytren was the first to excise the lower jaw and the first to amputate the cervix of the uterus for carcinoma Among his greatest triumphs was his operation for the establishment of an artificial anus (lumbar colostomy) and his successful ligation of the subclavian artery He introduced a new classification of burns describing six degrees of severity Today his name lives because he described idiopathic contracture of the palmar fascia still known throughout the world as Dupuytren s contracture



Typical Dupuytren s Contracture

This is a common condition in the elderly and is much commoner in men than in women There is fibrosis of the palmar aponeurosis which produces a flexation deformity of the finger at the metacarpo phalangeal and proximal inter phalangeal joints usually starting at the fourth digit and spreading to the fifth and sometimes to the third finger Since the aponeurosis only extends distally to the base of the middle phalanx the distal inter phalangeal joint escapes The contracture is often bilateral and may occasionaly affect the plantar fascia also The cause of this condition remains as much a mystery today as it was when first described by Dupuytren

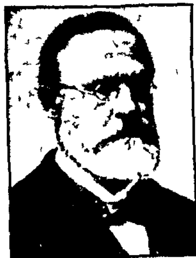
Dupuytren like so many who have risen from poverty to affluence was parsimonious cold and overbearing He tolerated no rivals and was called by his contemporaries 'The first of surgeons and the least of men and 'The brigand of



Hotel Dieu Forntage on the Seine with the tower of Notre Dame in the background

the Hotel Dieu At the same time all were forced to admit his pre-eminent abilities The supreme self confidence of this Surgeon in Chief can be summarised in his own words I have been mistaken but I have been mistaken less than other surgeons

One day in November 1833 while walking to the Hotel Dieu Dupuytren suffered a stroke He was obliged to give up work although he protested that rest is death He died on 8th February 1935 at the age of 57 having lifted himself from the most humble to the highest rank and added another name to the glories of France



ERB'S PALSY

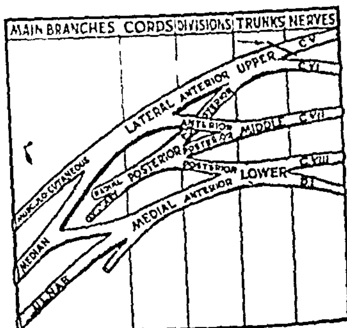
WILHELM HEINRICH ERB 1840 1921

Wilhelm Erb the leading German neurologist of his day was born at Winnweiler in Bavaria in 1840 the son of a forester He began his medical studies at the University of Heidelberg continued them in Erlangen and received his Doctor s degree at Munich in 1864 After a short period spent in the study of pathology he returned to Heidelberg as a teacher of medicine and built up a reputation as an original worker and writer

In 1880 he was appointed Professor of Medicine at Leipzig but after three years returned to occupy the corresponding position at his old University at Heidelberg Here he remained in spite of many tempting calls to other universities and carried out the important researches which made him world famous

In 1886 Erb introduced the method of electrodiagnosis by galvanic and induction currents and he was a pioneer in the field of electrotherapy Among the most important of his publications were his handbooks on diseases of nerves the spinal cord and muscular disorders It was he who coined the term tendon reflex

In 1874 Erb described the form of injury to the upper brachial plexus involving the roots of C5 and C6 known as Erb s paralysis This occurs not uncommonly during childbirth when as a result of difficult labour the infant s head becomes displaced excessively or the shoulder is forcibly depressed Much more rarely it occurs in adolescent or adult life from a weight falling upon the shoulder or from



The brachial plexus showing the lesion in Erb s Palsy (arrowed)

other accidental violence

In a classical paper entitled *Concerning an unusual localisation of brachial plexus paralyses* he described four examples in adult patients and in addition wrote I have myself observed a case in an infant which had been delivered two months before after a version and subsequent extraction I found the arm rather mobile flaccid and lay extended by the side of the trunk in a position of full internal rotation the wrist and fingers were flexed andmoved little More precise observation which is so difficult in infants showed complete paralysis of the deltoid biceps brachialis and possibly of brachio radialis There was marked weakness of all the muscles innervated by the radial nerve The fact that these cases had a similar neurological deficit led him to state It is probable that the lesion in the cases mentioned was localised to the fifth or sixth cervical roots or their anterior branches or at the junction of them both

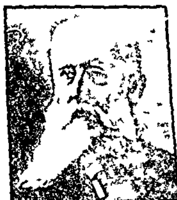
Erb s researches on syphilis of the nervous system and on the muscular dystrophies were also of outstanding importance In 1878 he clarified the methods of diagnosis of myasthenia gravis

A great investigator he was even greater as a clinical teacher and diagnostician He lived only for science and when he returned from his very rare vacations invariably brought back the manuscript of some important new work He was a



Erbs Palsy The hand is held in what is known as the policeman s tip position

hard taskmaster and although everyone respected him his gruff manner made feared Like most Germans he was passionately found of music and he was concert when a cerebral haemorrhage occurred and brought a calm and pea end He was then in his eighty first year



ESMARCH'S BANDAGE

FRIEDRICH VON ESMARCH 1823 1908

Johann Friedrich August von Esmarch was born at Tonning in Schleswig Holstein in Germany just south of the Danish border He studied medicine at the Universities of Kiel and Gottingen and qualified in 1848

It was in this year that war between Denmark and Germany broke out and Esmarch was called up as a military surgeon during the campaign he was taken prisoner by the Danes After the war had ended he returned to Kiel and renewed his association with the university where three or four years later he was elected professor of clinical surgery



Esmarch s bandage applied All the venous blood is driven from the limb before the femoral artery is compressed

An ardent supporter of antiseptic surgery his great interest lay in the treatment of the wounded on the battlefield To lessen the horrors of warfare became Esmarch s chief mission in life As a result of the experience he gained in the Danish war he wrote book on *bullet Wounds*

He saw further active service during the war against Austria in 1866 and yet again in 1870 in the war against France when he held the rank of Surgeon General

Esmarch showed by his writings the necessity of first aid on the battlefield he



Commencing below the bandage is unwrapped leaving only the first two turns encircling the thigh





Two illustrations from Esmarch s *Surgeons Handbook on the Treatment of Wounded in War*

advised that every soldier should carry a first aid outfit, and should be instructed how to use it A civilian association of trained first aid workers was organised by him His *First Aid to the Injured* published in 1875 befcame the best known book on the subject and was translated into English There is no doubt that Esmarch greatly advanced the surgery of warfare of the 19th century—so much so that he has been called the Ambroise Pare of Germany

Esmarch s name is perpetuated by his rubber bandage which when properly applied, allowed operations to be carried out on the lower extremity such as removal of a semilunar cartilage of the knee joint through a bloodless field

Soon after his return from the Danish war Esmarch married the daughter of his teacher Stromeyer who was then professor at Kiel By his secound marriage in 1872 to Princess Henriette von Schleswig Holstein he became an uncle of Emperor William II the notorious Kaiser Bill of World War I

In Germany Esmarch enjoyed the highest reputation as a surgeon and a teacher In his native town of Tonning there is a statue erected to him When he retired from the chair in 1899 Emperor William conferred upon him the title of Excellency

He died at the age of 85

George Friedrich Louis Stromeyer 1804 1876 Professor of Surgery Kiel, was the Father of Military Surgery in Germany

Ambroise Pare 1510 1590 the great French military surgeon, discarded the use of boiling oil to staunch haemorrhage after amputation of a limb and re introduced the use of a ligature and dry dressings One of his most famous saying was Je l ay pansay Dieu l a guerit (I dressed him and God healed him)

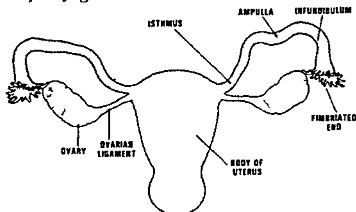


THE FALLOPIAN TUBES

GABRIEL FALLOPIUS
1523-1562

Gabriel Fallopius was one of the most illustrious anatomists of the sixteenth century In the course of a brief career (he died when he was 39 years of age) he made a number of discoveries

Fallopius gave a good description of the human oviducts which have been known ever since as the Fallopian Tubes He described the ovaries and the round ligaments and he gave the names that they now bear to the vagina and the placenta He discovered the semi-circular canals and was the first to describe the trigeminal auditory and glossopharyngeal nerves



The Fallopian tubes and adjacent structures

Falloplus was the favourite pupil of the great anatomist Vesalius It was Vesalius and some of his contemporaries of the Italian school who founded the modern science of anatomy

It must be explained that it was not until the sixteenth century that men commenced to dissect the human body systematically and to record by means of the written word as well as by illustration the complex disposition and pathways of the structures they unravelled Owing to religious scruples concerning human dissection from the second to the sixteenth centuries there was absolutely no advance in anatomical knowledge The brilliant exception was Mondino de Luzzi (1270?-1326) of Bologna who in 1316 wrote the first anatomical textbook worthy of the name The works of Galen, and of Galen only, were accepted as the alpha and omega of anatomical learning What Galen had decreed was not only the final authority but anyone who questioned that authority ran risks similar to those encountered by the bold spirits who dared to assert that the earth was not flat. On the rare occasions when anatomical courses were given at the universities menials performed the dissections while the Professor read what Galen had to say on the subject So rolled by not years but centuries of the perpetration and prepetuation of the grossest errors so far as the study of anatomy was concerned At long last all this was changed by Vesalius and his pupils



Vesalius demonstrating Anatomy at Padua in 1546
In 1551 Falloplus succeeded his master

Gabriel Falloplus was born at Modena in North Italy He held an ecclesiastic

appointment in the cathedral of his native town but he gave this up in order to study medicine Fallopius had the greatest respect for his master Vesalius, and in 1551 the pupil succeeded the teacher as Professor of Anatomy in the University of Padua

Fallopius was very versatile besides his anatomical work he taught and wrote on chemistry botany and surgery He had charge of the botanical garden at Padua and was a good practical surgeon His name will never be forgotton

Andreas Vesalius 1514-1564, peformed dissections successively in Bologna, Pisa, Basle and Padua. His great work De Humani Corporis Fabrica was published in Basle in 1543



FERGUSSON'S LION FORCEPS

FERGUSSON'S MOUTH GAG

FERGUSSON'S SPECULUM

SIR WILLIAM FERGUSSON 1808-1877

Sir William Fergusson was the greatest surgeon of his day Indeed he was probably the greatest of the pre Listerian operators It is remarkable that between 1828 and 1864 (before the days of anaesthesia and asepsis) Fergusson was able to claim 129 successes out of 134 cases of cleft palate upon which he operated and among 400 cases of hare lip operated upon by him during the same period there were only three failures His speed at amputation through the thigh was prodigious

Supposing I had to have my leg amputated—who is the best man to do it? enquired H R H Albert the Prince Consort in 1849 of one of the Court officials 'Why Fergusson by all means was the answer 'Then replied the Prince he shall be my surgeon



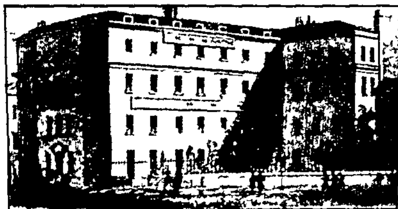
(A) Cleft Palate



(B) The same fourteen days after operation

William Fergusson the son of the Laird of Lochmaben Dumfriesshire was born at Prestonpans Scotland and was educated at the High School Edinburgh and later went on to the University in the city Originally he intended to follow the law but finding the lawyer s office most uncongenial he abandoned it for the study of medicine At the age of 17 he became a pupil of Robert Knox Under Knox's tuition he became a first-class dissector It was this training in anatomy which doubtless stood him in such stead in the practice of surgery

In 1829 at the age of 21 Fergusson was admitted to the Fellowship of the Royal College of Surgeons of Edinburgh having qualified L R C S one year previously Two years later he became Surgeon to the Dispensary It was while holding this office that he tied the subclavian artery an operation that had been performed only twice before in Scotland At the age of 25 he married an heiress and six years later he was appointed Surgeon to the Royal Infirmary in succession to Robert Liston and so successful was he that his practice rivalled that of Professor Syme In 1840 he was offered the vacant Chair of Surgery at King's College London and Fergusson always a man of energy and enterprise migrated from Edinburgh to London It was not long before he was elected a Fellow of the Royal College of Surgeons of England Fergusson was tall dignified with handsome features large dark eyes and a benevolent expression His hands were large and powerful



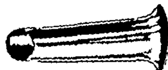
King's College Hospital in 1845

Fergusson invented many instruments some of which are in use to-day His lion forceps for excision of the upper jaw his mouth gag and his vaginal speculum

Robert Knox, 1791 1862 M D (Edin) Lecture in Anatomy After the Burke and Hare incident the school declined, and he was forced to seek other posts



Fergusson s Mouth Gag



Fergusson s Speculum



Fergusson s Lion Forceps

are the best known It was he who coined the term conservative surgery and in suitable cases he excised a diseased joint instead of sacrificing the limb Among his many surgical accomplishments was that of cutting for stone in the bladder which he performed so quickly that it was said that if one blinked one might see no operation at all During all his operations he expected absolute silence he himself never spoke until the patient was off the operation table In 1855 he was appointed Surgeon Extraordinary to Queen Victoria In 1866 a baronetcy was conferred upon him and in 1870 he served as President of the Royal College of Surgeons of England He died from Bright s disease at the age of 69 but he was performing operations before large numbers of spectators a few weeks prior to his death He was buried at West Linton near his beloved Scottish home Sir James Paget described Fergusson as the greatest master of the surgical art and the greatest practical surgeon of our time



THE VEINS OF GALEN (The Internal Cerebral Veins)

GALEN
A D 130 200

After Hippocrates the name of Galen is the greatest in ancient medicine Born at Pergamum in Asia Minor (now Bergama in Turkey) in A D 130 he was the son of an architect Galen studied at the best medical schools of the day including Smyrna Corinth and Alexandria Returning to his native city in his twenty eighth year he remained at Pergamum for four years during which time he held the post of surgeon to the gladiators

At the age of 32 he journeyed to Rome and there commenced to practise He gave public lectures on anatomy and soon became a fashionable physician His popularity grew he was summoned to treat Marcus Aurelius who after a heavy meal of cheese had developed intestinal colic The patient recovered quickly and so impressed was the Emperor that he made Galen his personal physician Galen accompanied his imperial master on an expedition to Germany After the death of Marcus Aurelius Galen was appointed physician successively to the Emperors Commodus and Septimus Severus Having occupied the position of the foremost physician in Rome for several years Galen withdrew from practice in that city to devote his life to study travel teaching and writing He became the most voluminous writer not only among the ancient physicians but among all the ancient philosophers

He was the first experimental physiologist it was he who first proved that arteries contain and carry blood Although his writings contained many errors they constituted the only available sources of information on medical subjects for centuries Galen was the first to describe the cranial nerves and the sympathetic system he made the first experimental bisection of the spinal cord and proved that

it caused paraplegia he formulated the first valid explanation of the mechanism of respiration he chroncicled the signs of inflammation even as they are taught today he differentiated pneumonia from pleurisy he was the first to describe an arterial aneurysm

Galen had great faith in drugs and collected plants from all part of the known world He is said to have owned a shop for the sale of drugs near the Forum in Rome

Galen does not set forth many clinical accounts of cases but he does not omit to record several extraordinary cures His greatest labours were in anatomy and physiology He does not appear to have had the opportunity of dissecting the human body most of his anatomical knowledge was founded on the dissection of pigs and apes It is strange that the Romans who delighted in blood and slaughter recoiled in horror from the idea of opening a dead body

Galen regarded himself as a disciple of Hippocrates but he had not the simplicity and genium of the Father of Medicine Hippocrates could say I do not know Galen had an answer to every problem and his answer was accepted not only by his contemporaries but by posterity for no less than 15 centuries No other physician has ever had such influence as time went on he was regarded as almost infallable As late as the year 1559 John Geynes M D Oxford was summoned before the Royal College of Physicians of London for casting doubt on the infallibility of Galen and he only saved himself from professional degradation by publicly acknowledging his error

Nothing can detract from Galen s place in the history of medicine. He represents the culmination of the study of the healing art by the Greks and was indeed a Prince of Physicians Of the books Galen wrote about 80 are still in existence most of them are on medicine but some are on natural science and logic

Redness heat, pain, swelling and loss of function The first four were recorded by Celsus Galen himself added only the last
Aulus Aurelius Cornelius Celsus Circa 25 A D Roman encyclopaedist and medical author



GAMGEE TISSUE

JOSEPH SAMPSON GAMGEE 1828-1886

On 18th February 1880 Mr Sampson Gamgee Surgeon to the Queen s Hospital at Birmingham gave a clinical lecture entitled *On Absorbent and Antiseptic Surgical Dressings* It was in the nature of a demonstration and the scene may be reconstructed somewhat as follows

Here said the lecturer is a piece of finest cotton wool You see it floats on water, and will continue to float for weeks Now into this tumbler of water I drop a pledget of cotton wool made absorbent by the removal of oily matter and you see that it sinks to the bottom in a very few seconds Here again is a piece of ordinary calico bandage It floats in the basin like a plank on a pong Now here is a piece of absorbent open woven bandage and you see that it sinks the instant I drop it on to the water

Clinical experience has demonstrated the great value of absorbent materials Discharges drain through them so rapidly that wounds are kept clean and the surronding parts dry

In this way Gamgee demonstrated the principle of his absorbent dressing which has been named after him Gamgee Tissue consists of a layer of absorbent cotton wool between two layers of absorbent gauze combining the powers both of compression and absorption

According to Gamgee the absorbent dressing was the invention of Dr Mathias Mayor of Lausanne but the idea of combining absorbent cotton wool with compressing gauze was Gamgee s own It was he who insisted that the material

Mathias Mayor 1776-1846 Surgeon, Cantonal Hospital, Lausanne Switzerland

should be manufactured in an antiseptic manner In his own words 'The soothing surgical peressure is like that which you interchange with the hand of a lady Your hand adapts itself to hers and gently presses it wherever it can touch it but nowhere squeezes it for fear of offending



The Queen s Hospital Birmingham 1841

Joseph Sampson Gamgee was the eldest son of a veterniary surgeon He was born at Leghorn Italy In 1847 he went to London and entered the Royal Veterinary College as a student He obtained his veterinary diploma but then went to University College where he had a brilliant career as a medical student winning many prizes He became a member of the Royal College of Surgeons of England in 1854 and in 1855 was appointed Surgeon to the British Italian Legion Hospital at Malta and gained experience among the wounded evacuated to that island In 1857 he was appointed Surgeon to the Queen s Hospital birmingham and became one of the leading surgeons of that city He died in 1886



GLAUBER'S SALTS

JOHANN RUDOLF GLAUBER 1603-1668

Glauber might with justice be designated the first manufacturing pharmaceutical chemist His considerable activities extended also far into the realms of commercial and industrial chemistry

Johann Glauber was born at Carlstadt in Bavaria in 1603 He never frequented the universities nor even had a mind to do so and it was his opinion that had he had a university education he would never have arrived at that knowledge of Nature that I now possess

Nothing is known of his parents but they must have been fairly well to-do for as a young man he set out on the Grand Tour Tarrying at Vienna he was stricken with the Hungarian disease (gastroenteritis) and were it not for this misfortune it is unlikely that his name would have become notable to the medicial profession The incident that changed the course of his life is best described in his own words

> On the advice of friends I dragged myself to a certain spring situated about a league from Neustadt I had brought with me a loaf of bread but with no hope of being able to eat it Arrived at the spring I took the loaf from my pocket and made a hole in it so that I could use it as a cup As I drank the water my appetite returned and I ended by eating the improvised cup in its turn I made several visits to the spring and was soon miraculously cured of my illness

The marvellous salt contained in this spring water (later identified as sodium sulphate) so impressed Glauber that he determined to commercialise it On returning home he satisfied himself that this salt was the same as that which he obtained from the residue after distilling a mixture of sea water and vitriol (sulphuric acid) He named this salt *Sal mirabile Glauber* By no means was this all that accrued from this experiment The distillate he found to be spirits of salt

(hydrochloric acid) and he was the first to manufacture hydrochloric acid on a large scale The latter was probably his principal contribution to the development of chemistry while the former made him far- famed as a pharmacist. While carrying on this business he lived successively in Salzburg, Kissingen Frankfurt-on the Main and Cologne before finally he decided to make his permanent home in Amsterdam Inspite of the success of his project he was always experimenting and he was the first chemist to prepare a large number of chemical substances including various salts of antimony zinc and tin He distilled ammonia from bones and made sal ammoniac by the addition of sea water He also produced sulphate of ammonia for use as a fertiliser and it is used in this connexion today for long this fertiliser was known by the name given to it by Glauber—*Sal Ammoniacum Secretum Galubert.*

Glauber always anxious to turn his knowledge of practical account acted in the capacity of a consulting industrial chemist in this role he added considerably to the knowledge of the chemistry of the wine and spirit industry and also to the manufacture of dyestuffs

One secret that he claimed to have discovered he would neither sell nor publish—it was that of the *alkahest* or universal solvent To make this known he pleaded would encourage luxury and Godlessness

Unmitigated success made Glauber extremely unpopular with his rivals Undoubtedly he suffered much not only on this account but because many of the fruits of his labour were stolen and claimed by others as their own inventions

He seems to have borne these tribulations stoically and without rancour for he writes

I grieve over the ignorance of my contemporaries and the ingratitude of man I fulfil my career and await my reward

Glauber was the author of some 30 books He died at his home in Amsterdam in 1668 After his death for about 100 years his name was revered by the pharmacists of Europe and the sign of their calling was a gilded wooden bust of Glauber s head placed over the entrance of their shops Perhaps this was the reward that Glauber awaited



THE GRAAFIAN FOLLICLE

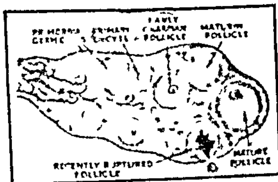
REGNIER DE GRAAF 1641-1673

Regnier de Graaf was born at Schoonhaven in the Netherlands the son of Cornelius de Graaf a celebrated architect and inventor of hydraulic machines When the time arrived young de Graaf decided on a medical career and enrolled as a student at Utrecht After a short period he transferred to the University of Leyden which at that time was one of the foremost medical centres in Europe Here he sat at the feet of the famous anatomist Sylvius de la Boe and incidentaly among his fellow students was Niels Stensen

Inspired by his teacher Sylvius de Graaf carried out a series of experiments on the physiology of the pancreas He constructed an external pancreatic fistula in a dog, employing a goose-quill His conclusions respecting the nature of the juice were largely erroneous but they gained for him the M D Leyden at the age of 22 years and his findings formed the basis of knowledge on the function of the pancreas for 200 years until the French physiologist Claude Bernard shattered them

In 1665 de Graaf went to Paris where he was well received in scientific circles and where he arranged for the publication of a French edition of his M D thesis He travelled through France studying anatomy and making many dissections In 1666 he returned to Holland and practised for a time at Delft In 1668 he published a treatise on the male organs of generation which contains an excellent account of the structure of the testis Later while in practice he invented a syringe for injecting the arteries of the cadaver, and a little later adapted this syringe for use in the administration of clysters (enemas) which were then enjoying unbridled popularity throughout Europe

Francois Sylvius de la Boe 1614 1672 Professor of Practical Medicine Leyden, Holland Described the aqueduct of Sylvius Claude Bernard 1813 1878 Professor of Medicine and Physiology Paris Came to Paris as a hopeful dramatist and remained to become the mastry physiologist of his time



In 1672 while still in practice as a physician de Graaf published his greatest work—that on the female generative organs In this book the opinions of both ancients and moderns are assessed critically and tested by comparision with the author s own dissecctions In 1667 Stensen the famous Danish anatomist had stated that the so called female tests of the older anatomists were not testes at all but egg producing organs corresponding with those of birds and other egg laying creatures. It was Stensen who coined the term ovary and maintained that even female mammals ovulated It was de Graaf who proved this theory by discovering the Graafian follicles of the ovaries and by describing their maturation These little vesicles he said perfectly resemble the eggs contained in the ovaries of birds

By dissecting rabbits at varying intervals after coitus de Graaf discoverd the corpus luteum and he traced the passage of the *ova down* the oviducts to the uterus De Graaf based these epochmaking discoveries on experiments performed on more than a hundered rabits and forty goats cows dogs cats and other animals

His book was accepted in his day and generation throughout the seats of learning in Europe and it would seem that he should have been awarded an academic post for which he yearned and which he merited—but not so In 1672 the chair of anatomy at Leyden became vacant by the death of his master Sylvius but de Graaf was not appointed apparently because he was a Catholic In 1673 he sent to the Royal Society of London the first letters of his townsman Anthony van Leeuwenhock the inventor of the microscope

De Graaf died of the plague in his thirty second year



GRAM'S STAIN

CHRISTIAN GRAM
1853-1938

It is interesting to know that the discoverer of Gram s method of staining bacteria knwon to evey final year medical student and every doctor in all corners of the Earth was not a professional bacteriologist but a physician and a teacher of general medicine

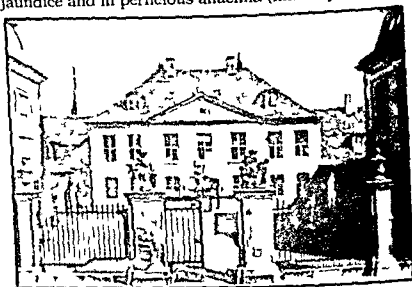


Gonococci (Gram s stain)

Christian Gram was born in Copenhagen the son of Julius Gram, LL D Professor of Common Law in the university of that city In 1871 at the age of 18 Christian enrolled at the University of Copenhagen to study botany and he pursued his botanical studies for three years before becoming a medical student Throughout his life he cherished a love for and knowledge of plants this knowledge formed the basis of his pharmacological interest and his botanical training made him extremely familiar with the use of the microscope

Gram graduated M B Copenhagen in 1878 and in 1882 he took the M D degree and gained the University medal with the thesis *On the Size of the Red Blood Corpuscles in Man*

In this thesis he described the method of drawing blood into a capillary tube sealing the ends of the tube allowing the blood to clot, breaking the tube at the border of the clot and the serum blowing out the serum on to a glass slide and examining the erythrocytes His measurements were great exactitude and are quoted to the present day he also called attention to the increase in size of the erythrocytes in jaundice and in pernicious anaemia (macrocytes)



From 1883 to 1885 Gram studied bacteriology and pharmacology at various German universities publishing as a short paper in *Friedlander s Journal* his observations on a new differential staining method of bacteria (Gram stain) An unconfirmed tradition has it that this discovery was the result of an accident—Lugol s solution being upset over a freshly stained bacterial smear with subsequent attempts to wash the iodine off with alcohol This if true only goes to show that an epoch making discovery is sometimes made by taking advantage of a fortuitous happening The discovery which has perpetuated Gram s name was made while he was pursuing post graduate studies in Berlin Later the author of a German textbook on bacteriology annexed this discovery for glory of the *Fatherland* by the ingenious claim 'The Gram stain which Christian Gram in 1884 discovered at Berlin As gram described in his paper many cocci particularly pneumococci and the cocci found in pyaemia are decolorized to which the editor of the journal (Carl Friedlander) quite contrary to what was the general custom wisely and generously added a footnote Undoubtedly posterity will be able to verify this

Gram's stain (notice that this should be spelt with a capital G) enables us to classify bacteria into two large sub-divisions the Gram positive and Gram negative organisms The former include the Clostridia Staphylococci and Streptococci while examples of the latter are Salmonella Shigella Pesudomanas Escherichia Proteus Klebsiella and Bacteroides

On returning to Copenhagen Gram became resident physician at the Kommunehospitalet and for some years district physician in Copenhagen In 1891 he was appointed Lecturer in Pharmacology and later in the same year Professor of Pharmacology In 1892 he became Physician in Chief at the Royal Frederik's Hospital In 1900 he changed his Professorship of Pharmacology for that of Medicine Gram's public and teaching duties did not leave him much time for scientific work and his later publications were mainly clinical he published altogether four volumes of clinical lectures

Professor Gram enjoyed a very large private practice but he never allowed this to interfere with his hospital duties each single patient in his department was seen and examined by himself with thoroughness and exactitude Professor Gram was much loved by his patients and to his pupils he was at the same time an authoritative teacher and a good friend After his retirement Professor Gram spent the last 15 years of his life in pursuit of his first love—botany and interested himself in measures for preventing tuberculosis Doubtless he felt the latter was his impelling duty because he had lost his wife from pulmonary tuberculosis

It was through the iron railing of this hospital that the medical student wearing the Goloshes of Happiness (but ignorant of their power) became entrapped with his head out and his body inside Hans Andersen's Fairy Tales

Hans Christian Andersen 1805 1875 The most gifted writer of fairy tale that the world has known

The Royal Fredrik's Hospital, built in 1757 is now the Museum for Applied Art In 1910 the Royal Frederik's Hospital was replaced by the modern Rigshospitalet, erected further from the City centre

Carl Friedlander 1847 1887 Pathologist Friedrichshain Hospital, Berlin



GRAVES' DISEASE

ROBERT JAMES GRAVES 1796-1853

As in descriptive anatomy so in clinical medicine surgery and pathology there are those who strive to do away with proper names and employ a purely anatomico pathological nomenclature There is much to be said for this methods of classification although it is sad that in many instances the discoverer s name becomes lost to the majority of the profession In the case of Graves disease there was an additional incentive to change the appellation seeing that it is quite certain that Graves was not the first to describe the condition known by his name



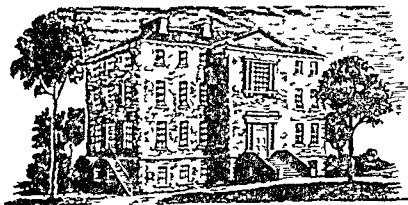
Fully established Graves Disease

The first attempt in this direction—and for a time it was very successful—was to call the condition exophthalmic goitre In due course it was pointed out by high authorities that some patients with this condition had no exophthalmos while a few others had no goitre

It was then agreed to recommend the use of the term primary toxic goitre and this is widely employed in spite of the fact that in a few cases there is no goitre For

these reasons George Crile Jnr admitted Because of the difficulties in terminology I am forced to fall back on the term Graves desease and like Crile more and more authors in the British Commonwealth and the U S A are once again employing the term Graves disease On the Continent the disease is known as Basedow's Disease)

Robert Graves was the third son of Dr Richard Graves Dean of Armagh and was born in 1796 After a brilliant student career at Trinity College Dublin he spent three years travelling He had a great facility for learning languages and spoke German so perfectly that he was taken for a German spy in Austria and was imprisoned for 10 days



The Meath Hospital in Graves day

On returning to Dublin Graves put up his plate as a physician and soon afterwards was elected physician to the Meath Hospital It was here that he introduced against much opposition the system of clinical teaching whereby the student actually examined the patient as well as writing the clinical history This system which emanated from Paris was not adopted by the English and Scottish medical schools until much later and was largely responsible for making the Dublin School of Medicine famous throughout Europe 'walking the Wards by medical students was first introduced in England by Sir William Blizard F R S 1743 1836 Surgeon to the London Hospital

When he was 39 years of age Graves published an excellent account of the disease which bears his name and it was the lucidity rather than the originality of this monograph that attracted so much attention He wrote I have lately seen three cases of violent and long continued palpitations in females in each of which the

same peculiarity presented itself viz enlargement of the thyroid gland the size of this gland at all times considerably greater than natural It was observed that the eyes assumed a singular apperance for the eyeballs were apparently enlarged so that when she slept or tried to shut her eyes the lids were incapable of closing When the eyes were open the white sclerotic could be seen to a breadth of several lines all around the cornea

Tall dark and distinguished Graves very presence as well as his fluent delivery enhanced his admirable clinical teaching which is summarised in his *Clinical Lectures (1848)* Perhaps Graves most important contribution to clinical medicine was his insistence that the pulse must be timed by the watch In his own opinion the greatest advance that he effected was the abandonment of bleeding and starving of patients with pyrexia and he requested that his epitaph should read He fed fevers

Karl Adolph Basedow 1799 1854 General practitioner Mersburg Germany
George Crile Jnr Contemporary Chief Surgeon, Cleveland Clinic Cleveland Ohio U.S.A Has carried on his father s famous thyroid clinic



GRAWITZ TUMOUR OF THE KIDNEY

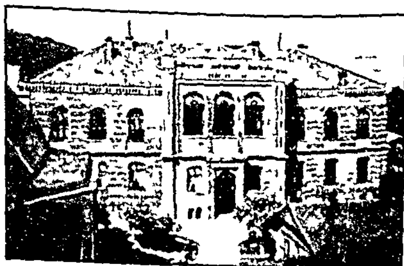
PAUL GRAWITZ 1850 1932

Paul Grawitz was born at Zerrin bei Butow situated in Pomerania on the shores of the Baltic Sea. He studied medicine at the Universities of Berlin and Halle and qualified in 1873 After qualification he became an assistant at the Pathological Institute at Berlin where he worked under the world famous Professor Virchow So engrossed did he become in the study of pathology that he determined to make this branch his career He continued to work under Virchow for 10 years

Grawitz is known today by his work on neoplasms of the kidney Grawitz tumour a renal adenocarcinoma is the most common new growth of the kidney The tumour often occupies one or other pole of the kidney the seat of election being the upper pole This fact and the colour of the tumour (characteristically it is butter yellow due to contained lipoid) led to the erroneous belief that the neoplasm was derived from misplaced adrenal tissue and for many years it was called a hypernephroma The latter inaccurate term still lingers Microscopically the tumour cells are typically large with an abundant foamy cytoplasm and a small central densely staining nucleus (clear cell tumour) Typically spread occurs by the blood stream with growth along the renal vein into the inferior vena cava Deposits in the lung bones and brain are common Occasionally a solitary blood borne deposit occurs so that removal of the primary growth together with this deposit has been followed by prolonged survival Grawitz published the first thorough study of these neoplasms in 1884



A Grawitz tumour (clear cell carcinoma) of the kidney



The Pathological Institute Greifswald where Grawitz worked for 37 years

Shortly after this and probably as a result of this brilliant piece of work Grawitz was called to the Chair of Pathology in the University of Greifswald a post that he

held for 37 years

In the course of his long career Grawitz made many important contributions to pathology In his latter years he was much occupied with researches in tissue culture. One of his greatest interest in life was the pathological museum at Greifswald He spent two hours daily in its care mounting specimens and writing description of them Grawitz died in his eighty second year having made the University of Greifswald famous (Greifswald is a town of 40 000 inhabitants situated on the Baltic coast of North East Germany)

Rudolf Virchow 1821 1902 Director of the Pathological Institute of the Charite Hospital, Berlin



HEBERDEN'S NODES

WILLIAM HEBERDEN 1710-1801

Heberden s description of his nodes is as follows

Digitorum Nodi What are these little hard knobs about the size of a small pea which are frequently seen upon the fingers particularly a little below the top near the joint? They have no connection with the gout being found in persons who never had it they continue for life and being hardly ever attended by pain or disposed to become sores are rather unsightly than inconvenient though they must be of some little hindrance to the free use of the fingers

It was these 80 words that perpetuated his name and called into being the Heberden Society for the study of Rheumatic Diseases It should be noted that Heberden made the significant statement that the nodes were not due to gout He did not say to what they were due They are in fact associated with osteo-arthrosis commoner in women than in men

Heberden s description of his nodes is actually one of his minor achievements not to be compared in importance with some of his other discoveries It was Heberden who first recognised angina pectoris and it was Heberden who first differentiated chickenpox from smallpox

Born on London in 1710 William Heberden was educated at Cambridge where he distinguished himself in classics Having taken his medical degree he practised in Cambridge for about ten years and gave an annual course of lectures on *materia medica* In 1748 he migrated to London becoming a Fellow of the Royal College of Physicians and commenced practice in the capital Possessed of considerable experience wide learning and culture he soon established himself He continued to practise in London for over fifty years and earned a reputation that has not been surpassed by any physician



Heberden s Nodes

Dr Samuel Johnson in his last illness being asked what physician he had summoned answered Dr Heberden *ultimus Romanorum* the last of our learned physicians

Dr Heberden died in 1801 at the great age of 91 in the following year William Heberden the younger who was himself a distinguished physician brought out the Latin edition of his father s *Commentaries on the History and Cure of Diseases* together with an English translation The Commentaries were built up from notes taken in Latin during more than half a century of busy practice Heberden s Commentaries are among the greatest monuments of clinical medicine excelled only by the *Aphorisms* of Hippocrates

Samuel Johnson, L L D (Dublin) 1709 1784 Famous Lexicographer and Writer his Dictionary appeared in 1755



THE HIPPOCRATIC FACIES

HIPPOCRATES
(?)460 370 B C

By common consent Hippocrates is regarded as the Father of Medicine and the greatest physician of all times He was the son of physician and was born about 460 B C on the island of Cos in the Egean Archipelago

The true practice of medicine began with Hippocrates It was he who severed the art of healing from witchcraft and superstition



Hippocrates led a wandering life practising and teaching in various parts of Greece He had many pupils including his two sons He and his pupils recorded their observations in writing These reports of actual cases are model clinical records unsurpassed for nearly two thousand years Many of the descriptions of diseases such as phthisis puerperal septicaemia and epilepsy might with but few changes take their place in any modern medical text book

Perhaps his best known description is that of the face of a patient suffering from advanced peritonitis now known as the Hippocratic Facies

'You should observe thus in acute diseases first the countenance of the patient if it be like those of persons in health and especially if it be like its usual self for this

is best of all But the opposite are the worst such as these a sharp nose hollow eyes sunken temples the ears cold contracted and their lobes turned outwards the skin about the forehead rough streched and parched the colour of the face greenish or livid If the symptoms do not subside (in a day and a night) be it known for certain that the end is at hand

The most famous work of Hippocrates is his *Aphorisms* These contains brief generalisations based upon his vast experience The aphorisms of Hippocrates have been revered by clinicians throughout the ages and many of them have passed into proverbs To select a few

Life is short and art is long the crisis is fleeting experiment risky decision difficult

No head injury is so slight that it should be neglected, or so severe that life should be despaired of

Convulsions supervening on a wound are deadly (Tetanus)

When sleep puts an end to delirium it is a good sign

Those naturally very fat are more liable to sudden death than the thin

In jaundice it is a grave matter if the liver become indurated

Eunuchs do not take the gout, nor become bald

In acute diseases coldness of the extremities is bad

Hippocrates was no specialist he treated every kind of malady His treatment was based upon common sense principle and was largely expectant. Good nursing and a rational diet played a great part

The medical profession pay homage to Hippocrates by taking the Hippocratic Oath when they enter the portals of medicine as qualified practitioners The following are excerpts from the Hippocratic Oath

I swear by Apollo the physician that according to my ability and judgement I will keep this oath to reckon him who taught me this Art equally dear to me as my parents I will follow that system of regimen which according to my ability and judgement I consider for the benefit of my patients and abstain from whatever is deleterious and mischievious I will give no deadly medicine to anyone if asked nor suggest any such counsel Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption Whatever in connection with my professional practice I see or hear I will not divulge as reckoning all such should be kept secret While I continue to keep this oath unviolated may it be granted to me to enjoy life and the practice of the Art respected by all men But should I trespass and violate this Oath may the reverse be my lot

The date of Hippocrates death is uncertain but it occurred between 377 and 359B C The latter date would make him 101 years of age at the time of his death

Such longevity is the more remarkable seeing that at that era the average expectation of life was much shorter than it is today

It is probable that what are now known collectively as the writings of Hippocrates were first brought together in the third century B C Manuscript copies of this compilation were circulated widely in Greece and the Middle East but the *Complete Works* were not printed until 1525 when a Latin version was issued at Rome The printed Greek text was brought out by the famous Venetian printer Aldus Manutius in 1526 The *Genuine Works of Hippocrates* were translated into English in 1849 by Francis Adams

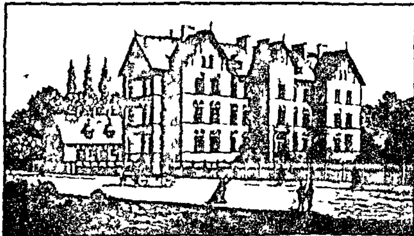
Francis Adams 1796-1861 General Practitioner Banchory Kincardine Scotland One of the greatest classical scholars the medical profession has produced



HIRSCHSPRUNG'S DISEASE

HARALD HIRSCHSPRUNG 1830 1916

Congenital dilatation of the colon is known as Hirschsprung's disease, because Professor Harald Hirschsprung of Copenhagen gave the first full and convincing account of the condition in 1887 There are several earlier references to the disease notably one by Parry of Bath in 1825 but Hirschsprung's careful study established its existence as a definite clinical entity

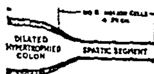


The Queen Louise Hospital for Childern Copenhagen Circa 1900

Harold Hirschsprung was born in Copenhagen and qualified M D Copenhagen in 1855 In 1879 he was appointed head physician to the Queen Louise Childern s

Caleb Hillier Parry 1755 1822 M D Edin F R S Physician, the General Hospital Bath In addition to describing Hirschsprung s disease before Hirschsprung Parry described Graves disease before Graves

Hospital in Copenhagen and he became professor of diseases of childern in 1877 Hirschsprung published many articles on subjects relating to childern s diseases especially on occlusion of the oesophagus and the small intestine intussusception rickets and rheumatism



Hirschsprung's disease

On the occasion of Harald Hirschsprung's *seventieth* birthday in 1900 there was a great celebration in his honour and a marble bust was unveiled in the hospital that he had served for so many years

In 1904 he retired from practice and he died at home when in his seventy seventh year

Hirschsprung's paper on Constipation in the Newborn due to Dilatation and Hypertrophy of the Colon was published in the *German yearbook of Paediatrics* in 1887 He presented postmortem specimens from two cases together with the clinical histories and speculated as to the cause of the condition



Hirschsprung's disease

In 1898 Sir Frederick Treves attributed the cause of Hirschsprung's disease to congential spasm of the distal segment thus preceding Orvass Swenson s re-

discovery of this concept by 50 years

Particularly by the studies of Martin Bodian the cause of the immotility of the spastic segment has become evident There is an absence of parasympathetic ganglion cells and this ganglion deficiency extends for a short distance into a transitional zone between the terminal spastic segment and the dilated and hypertrophied portions

Sir Fredrick Treves 1853 1923 Surgeon The London Hospital In 1902 he operated successfully upon King Edward VII for an appendix abscess

Orvass Swenson Contemporary Formerly Surgeon in Chief Childern s Memorial Hospital, Chicago Illinois U S A

Martin Bodian, 1910-1963 Morbid Anatomist, Hospital for Sick Childern, Great Ormond Street, London



HODGKIN'S DISEASE

THOMAS HODGKIN 1798-1866

Thomas Hodgkin the discoverer of Hodgkin s disease was not appreciated in his day and generation Indeed he may be described as a failure He failed to obtain a position on the staff of Guy s Hospital and met with little success in private practice He eventually gave up the practice of medicine altogether

Thomas Hodgkin was born at Pentonville London the son of John Hodgkin who was a fashionable tutor and instructed young ladies in mathematics classics and especially handwriting in which he excelled John Hodgkin was a Quaker and throught life his son retained the distinctive dress and demeanour then characteristic of members of that sect He studied medicine at Guy s Hospital and graduated M D Edinburgh in 1823 He then visited Paris and learned the use of the stethoscope from its inventor that great physician Lannec Hodgkin was one of the first physicians in England to adopt what his contemporaries called a new fangled contrivance

Hodgkin eschewed worldly matters The tale is told that he sat up all night with a very wealthy man who was ill and recovered The patient was so greatful that he handed Hodgkin a blank cheque telling him to fill it in for any amount he liked Hodgkin entered ten pounds The patient asked him why he put such a moderate amount Hodgkin replied that he thought the drawer of the cheque looked as though he could not afford more As a result the patient was so angry that he never again asked Hodgkin for his services

Believing a study of pathology would help to make him a better physician Hodgkin became Curator of the Museum at Guy s Hospital and in 1832 he read a paper with the title *On Some Morbid Appearances of the Absorbent Glands and Spleen* based

on specimens of morbid anatomy that he had collected The dissertation contained a description of that peculiar disease of lymphnodes associated with enlargement of the spleen now known as Hodgkin s disease In spite of the fact that the majority of these specimens were true examples of the disease that bears his name (as can be verified in the collection still preserved in Guy s Hospital) this article attracted little or no attention at the time Thirty three years later Sir Samuel Wilks disinterred it and added a considerable number of his own cases It is greatly to Sir Samuel Wilks credit that he called the condition Hodgkin s desease (1865)



Massive bilateral enlargement of the cervical lymph nodes due to Hodgkin s disease

Dejected by his repeated failure to obtain a position on the medical staff of Guy s Hospital Hodgkin decided to abandon the practice of medicine and henceforth to devote himself to questions of reform and charitable works He died of dysentery contracted at Jaffa whither he had repaired on a mission of relief to the Jews Thomas Hodgkin was burried in a small Protestant cemetery in Jaffa His Jewish friend Sir Moses Montefiore arranged for an obelisk to be erected over the grave on which was inscribed Here rests the body of Thomas Hodgkin M D a man distinguished alike for scientific attainments medical skills and self sacrificing philanthropy He died at Jaffa the 4th April 1866 in the 68th year of his age in the faith and hope of the Gospel Regretfully today his grave is neglected and overgrown

Rene Theophile Hyacinthe Laennec 1781 1826 Physician, Hopital Necker Paris
Sir Samuel Wilks 1824 1911 Physician Guy s Hospital, London

In 1914 Horsley made another momentous discovery He founded the troublesome haemorrhagic oozing from soft tissues such as brain or liver could be controlled by applying living muscle tissue to the bleeding surface and holding it there

Victor Horsley was born in Kensington London the son of John Collcot Horsley an artist of such merit as to receive the distinction of R A. He was an opponent of the pre Raphaelites and he won a special favour among the prudish mid Victorians by strongly opposing the employment of nude artist s models Victor was brought up at his father s country house near Cranbrook Kent where he attended the Elizabethan school at Cranbrook as a day boy On leaving school he entered University College London as a medical student After a brilliant undergraduate career he qualified M B B S (Lond) taking the Gold Medal in Surgery in 1881 His brilliance was such that after serving the hospital in several Junior appointments he was elected surgeon to University College Hospital and also to the National Hospital Queen Square In 1887 he succesfully removed a tumour of the spinal cord with complete recovery of his paraplegic patient This was the first operation of its kind ever to be performed and was a landmark in the history of surgery



University College Hospital in 1880 It was then called the North London Hospital

Apart from his professional activities he was keenly interested in sociology and politics and strongly supported women s suffrage He was a fierce opponent of the use of tobacco and alcohol It was his belief that it was the ingestion of alcohol rather than the sun *per se* that caused heat stroke and to prove his theory he went about without a sun helmet in the topical sun He died of heat stroke in 1916 while

Ambroise Pare 1510-1590 After being apprenticed to a provincial barber surgeon, and working as a dresser at the Hotel Dieu he became one of the greatest military surgeons of all time

serving with the Royal Army Medical Corps in Mesopotamia and was buried with military honours at Amara

Sir Peter Wyatt Squire 1846 1919 Pharmacist The son of Peter Squire of Squire s Companion to the Pharmacopoea the later editions of which Sir Peter edicted He was knighted because he had acted for many years as pharmacist to the Royal Household



HUTCHINSON'S TEETH

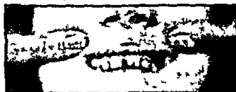
HUTCHINSON'S PUPILS

SIR JONATHAN HUTCHINSON 1828-1913

Jonathan Hutchinson was born at Selby Yorkshire the son of a prosperous middleman in the flax trade The family being Quakers in accordance with the practice of the Society of Friends Jonathan was educated at home until the age of 17 when he was apprenticed to a doctor of York At the age of 21 he came to London and entered St Bartholomews Hospital to work under James Paget While acting as a dresser in the Out patient Department Hutchinson noticed two juvenile patients suffering from an indentical chronic inflamation of the eyes Both these childern had stigmata of syphilis but at that time interstitial keratitis (as Jonathan Hutchinson subsequently named it) was not considered to be a syphilitic origin

Jonathan Hutchinson qualified M R C S (Eng) in 1850 Thus qualified he obtained the post of house surgeon at the County Hospital York Six months later he returned to London determined to gain a special knowledge of diseases of the eye and to this end he attended several hospitals with ophthalmic departments During this time he was dependent on an allowance from home and in bread and figs While understanding this postgraduate study he contributed weekly to the *Medical Times* a column entitled *Reports from the Hospital* for which no doubt he received a small remuneration At the age of 25 Hutchinson succeeded in being appointed surgeon to both the Hospital for Diseases of the Skin blackfriars and to the Metropolitan Hospital At this point he changed his way of life Having married he went to live at Reigate Surrey and had consulting rooms in Finsbury Circus in the heart of the City of london In 1858 he published his epoch making paper on interstitial keratitis and to the original two he had observed as a dresser he had added no less than 62 more cases Later in life he elaborated this thesis still

further to embrace other stigmata of congenital syphilis These included the pegtop incisor teeth (now known the world over as Hutchinson s teeth) and deafness He also framed his triad of signs of congenital syphilis to wit 8th nerve deafness Hutchinson s teeth and interstitial keratitis



Hutchinson s teeth The left central incisor is characteristic

In 1860 he was appointed assistant surgeon to the London Hospital and he moved from Reigate to reside in Finsbury Circus In 1862 he was elected F R C S (Eng) and in the following year was appointed surgeon to Moorfields Eye Hospital

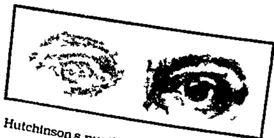
In January 1865 Jonathan Hutchinson won the Astley Cooper prize of £ 300 for an essay *On Injuries of the Head and Their Treatment* in which he described the original observation that in extrdrural heamorrhage as the compression of the brain increases the pupil of the same side undergoes increasing dilatation and becomes increasingly inactive to a bright light This phenomenon is due to compression of the IIIrd cranial (oculomotor) nerve against the tentorium cerebelli This nerve transmits the parasympathetic constrictor fibres to the pupil as these are paralysed the unopposed sympathetic fibres dilates the pupil This proved and has continued to prove of signal service in the diagnosis of traumatic extradural haemorrhage



The potato tumour of Jonathan Hutchinson

Another condition that remains associated with his name in the Potato tumour of Jonathan Hutchinson (carotid body tumour)

Sir Astley Cooper 1768 1841 Surgeon Guy s Hospital, London

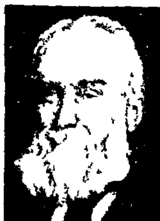


Hutchinson s pupil Side of lesion dilated

Jonathan Hutchinson by his tremendous industry unrivalled powers of observation lucid writings and thronged lectures to students and medical societies became one of the leading figures in the profession of his day Mainly an ophthalmologist a dermatologist and a syphilologist his interests extened beyond these spheres any one of which might have been a life s work for a more oridinary man In spite of being one of London s best known consultants Jonathan Hutchinson did not move from the City of London to the West End until his forty seventh year and he did so then only on the advice of his former teacher Sir James Paget

In his prime Hutchinson was described as being above middle height possesing dark eyes that seemed to look fast one over his spectacles black hair and a black beard He was an insatiable collector and formed a vast museum of specimens coloured drawings and charts He wrote numerous books and published 10 volumes of *Archives of Surgery* in periodical form the entire contents of these volumes were written by himself

In 1882 he was elected a Fellow of the Royal Society and in 1889 President of the Royal College of Surgeons He was knighted in 1908



JACKSONIAN EPILEPSY

JOHN HUGHLINGS JACKSON 1835-1911

By Jacksonian epilepsy is understood the occurance of fits commencing in one group of muscles Usually the spasms are limited to one side of the body Sometimes this form of epilepsy is a consequence of an injury to the brain viz blood clot a depressed fracture or a spicule of bone pressing upon the motor cortex of one side of the brain with the result that seizures occur on the opposite side of the body If for instance that part of the cerebral cortex which controls the forearms is the part that is irritated the fit will start in the forearm—an important diagonstic feature Jacksonian epilepsy can also result from a tumour of the brain involving the motor cortex Cortical epilepsy with its pecularities of focal attacks clonic spasms and *late* loss of consciousness—a discovery that brought Hughlings Jackson immortal fame—was described in 1875

John Hughlings Jackson was born in the Yorkshire village of Green Hammerton the son of a farmer who was also a small brewer After attending nearby schools John was apprenticed to a practitioner in York where at that time there was a small medical school which had but a short existence From York Medical School Hughlings Jackson proceeded to St Bartholomew s Hospital London and he qulified M R C S and L S A in 1856 Returning to York as house surgeon he remained in that city until 1859 He then decided to migrate to London and armed with an introduction to Jonathan Hutchinson who also came from York he made rapid progress in the capital city In a matter of months Hughlings Jackson was appointed Lecturer in Pathology at the London Hospital and having taken the M D St Andrews and the M R C P London he was elected assistant physician to the London Hospital It is said that Jackson s determination to specialise in neurology

came about when he himself suffered an attack of Bell s palsy Be that as it may he was appointed assistant physician to the National Hospital for nervous Diseases Queen Square in 1862



The National Hospital Queen Square London

Hughlings Jackson did much to establish the use of the ophthalmoscope in the diagnosis of brain disease He made notable advances in the understanding of aphasia In 1875 he originated the doctrine of level in the central nervous system. Unfortunately his style of writing was far from clear Students turned away from the bristling difficulties of reading Hughling Jackson s numerous papers As a consequence many of his most notable observations remained unappreciated until years later when his brilliant pupils expounded them

When he was 30 years of age Hughlings Jackson married his cousin and 11 years later by the irony of fate she died of cerebral thrombosis associated with Jacksonian epilepsy After her death he became more shy and rather eccentric. When he read a book he would tear out those pages that interested him and throw the remainder away On one occasion he bought a book at a railway station tore it in half ripped off the covers and handed them to the astonished assistant Placing one half of the coverless book in each pocket of his overcoat he proceeded to catch the train

Hughlings Jackson died of pneumonia at the age of 76 years His many advancements of neurology receive greater recognition today than they did in his lifetime

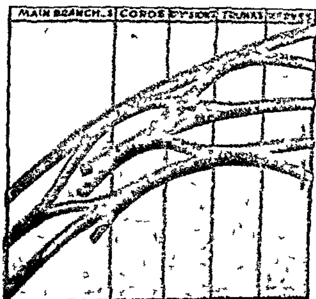


KLUMPKE'S PARALYSIS

MADAME DEJERINE KLUMPKE 1859-1927

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In 1877 four sisters the misses Klumpke arrived in Paris from Lausanne They were of American origin having been born in San Franciso but had been educated in Switzerland Auguste Klumpke the future physician was the most famous of the four though all the sisters diaplayed great ability and became well known in Paris one as an artist another as a musician and the third as a Doctor of Science



Showing the lesion in Kulmpke s Paralysis C viii is sometimes involved

Auguste decided to enter the medical profession Those were pioneer days for medical women and she had a hard struggle to overcome the prejudices of the French teachers Eventually her importunity was rewarded and the Professor of Medicine accepted her as a student in the Medical Faculty of the

University of Paris Miss Klumpke proved a model pupil Her brilliance was extraordinary while a student, she described what is known today as Klumpke s Paralysis

This as she described is a lesion of the lower trunk or the medial cord of the brachial plexus caused by such accidents as clutching at a ledge by a falling person failing to obtain a foothold on a passing bus, or by an unreduced dislocation of the humerus The injury leads to wasting of all the small muscles of the hand (claw hand) together with a sensory impairment of the inner $3\frac{1}{2}$ fingers and the ulnar side of the forearm She also recorded that the lesion may be associated with Horner s syndrome with constriction of the pupil and ptosis due to injury of the adjacent stellate ganglion



The principal entrance to the University of Paris On the right is the medical wing

In the course of her studies Miss Klumpke made the acquaintance of Jules Dejerine a rising young neurologist. She married him while she was a final year student. She obtained her M D degree in 1888 Known as Madame Dejerine Kulmpke she helped her husband in his great work on the anatomy of the central nervous system and when he died in 1917 she founded a laboratory to perpetuate his memory and to carry on his research work Held in esteem throughout France she was President of the Societe de Neurologie and an Officer of the Legion of Honour She died in 1927 at the age of 68 years leaving one daughter who married a French surgeon

Johann Friedrich Horner 1831 1886 Professor of [illegible] *the syndrome in 1869*

Jules Dejerine 1849-1917 Clinical Chief at [illegible]

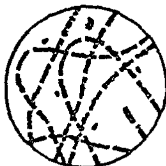


KOCH'S BACILLUS

KOCH'S POSTULATES

ROBERT KOCH
1843 1910

The life of Robert Koch is perhaps the most inspiring of any in this book Robert Koch was the son of mining engineer and was born at Klausthal in Hanover on 11th December 1843 After receiving his education at the local gymnasium he studied at Goottingen and took the M D in 1866 Soon afterwards he went into general practice at Langenhngen near Hanover In 1870 he served as a surgeon in the Franco-Prussian war and on leaving the army at the close of the war he obtained the Diploma of Public Health and combined the duties of Medical Officer of Health withthose of general practice at Wollstein in Posen



Anthrax bacilli showing spores Koch s first great essay in bacteriology

The career of Robert Koch is a classic example of what can be achieved by application and perseverance Far away from the stimulus of a university and laboratories he devoted himself to microscopical study

In 1876 while in the midst of his country practice Koch published an epoch-making paper on the anthrax bacillus he showed that the anthrax bacilli grew in long chains and that the bacilli formed spores which retained their virulence for



Mycobacterium tuberculosis also known as Koch s bacilli The discovery of the cause of tuberculosis was the crowning glory of Koch s life

years

Hardly can it be appreciated today that this was the very first paper in the world of allege that an infectious disease can be and often is caused by a definite micro-organism Koch proved that it could be beyond all possibility of doubt As a contry doctor Koch had formulated a hypothesis that was confirmed by the great Pasteur and Pasteur himself hailed the discovery as the greatest yet made in bacteriology Every reader and especially every isolated practitioner will do well to dwell for a moment on this inspiring thought The following year Koch published his method of fixing and staining bacteria Other paper which elevated him to the front rank in medical science quickly followed He was appointed to the staff of the Imperial Health Department so that he could continue his researches

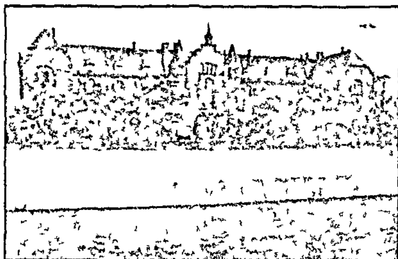
In 1881 Koch demonstrated the first pure cultures of bacteria at the International Medical Congress in London After the lecture the grate Pasteur rushed forward with the exclamation *C est un grand progres!*

It was on 24th March 1882 that Koch announced to the Berlin Physiological Society his discovery of the *Mycobacterium tuberculosis*

Koch defined the three conditions which need to be fulfilled in order to justify the conclusion that a particular disease is called by a particular orginism These three Koch s Postulates are

1 The organism should be found in all cases of the disease and its distribution in the body should accord with the observed lesions

Klyus Oasteur 1822 1895 World famous French chemist and bacteriologist (He was a D Sc but was not qualified medically) Founder of the Pasteur Institute Paris



The Robert Koch Institute Berlin completed in 1901 Within its walls are preserved the ashes of Robert Koch

2 The organism should be cultivated outside the host and subcultured for several generations

3 The organism isolated in these sub-cultures should then reproduce the disease when transmitted to other hosts

In 1885 he was offered and accepted the appointment of Professor of Hygiene at the University of Berlin Wedded as he was to research it did not suit him to spend his days teaching students and after a few years he resigned from the professorship A post was created for him—that of chief of the Institute for Infectious Diseases—where he could follow his inclinations

Louis Pasteur 1822 1895 World famous French Chemist and bacteriologist (He was a D Sc but was not qualified medically) founder of the Pasteur Institute Paris

Koch returned again and again to the problem of tuberculosis World wide excitement was caused when in 1890 he announced his discovery of Tuberculin although hopes that inoculation of this extract of the bacillus might cure tuberculosis were not later confirmed Koch travelled all over the world studying epidemics At the request of the British Government he went to India* and carried out important work on bubonic plague He proved that the malady was transmitted to human beings by the rat flea He studied the tsetse fly in German East Africa and went to Ceylon for researches in malaria In 1906 he visited South Africa as head of the

This was his second visit to India on the first visit in 1883 he discovered the cause of cholera the Vibrio cholerae When he returned home he was awarded a National prize of 100 000 marks

Sleeping Sickness Commission

In 1905 the Nobel Prize for medicine was awarded to him

In appearance Koch was a typical Prussian savant, a man of unceasing industry dignified and modest Undoubtedly he was one of the greatest men of science his country has ever produced He died of heart failure at the age of 67 By his own wish his body was cremated and the ashes deposited in his Institute at Berlin

The importance of Koch s discoveries cannot be exaggerated and there are few to whom medicine owes so much

Rudolf Virchow 1821 1902 Director of the Pathological Institute of the Charite Hospital, Berlin



KOCHER'S
INCISIONS
for thyroidectomy
and cholecystectomy
MANOEUVRE
for dislocated shoulder
MANOEUVRE
for mobilisation of
the duodenum
ARTERY CLAMP
GLAND DISSECTOR
THYROID RETRACTOR

THEODOR
KOCHER
1841-1917

Theodor Kocher was Switzerland s greatest surgeon whose important contributions ranged widely over the whole field of surgery He is a member of the elite club of surgeons who have received the Nobel Prize

Kocher was born in Bern the son of a distinguished engineer and it was in Bern that he spent nearly the whole of his professional life After graduation from the University of that city he visited clinics in Berlin Vienna Paris and London including those of Billroth Lister and Spencer Wells Returning to the surgical clinic of his University kocher was promoted to Professor at the early age of 31 and remained in that positon for the next 45 years, dying in harness at the age of 76

His textbook *Operative Surgery* was immensely popular and was translated into several languages His profound knowledge of anatomy is demonstrated by its details of surgical approaches to all the major joints In it he also described his well known subcostal incision for exposure of the gall bladder which is still frequently

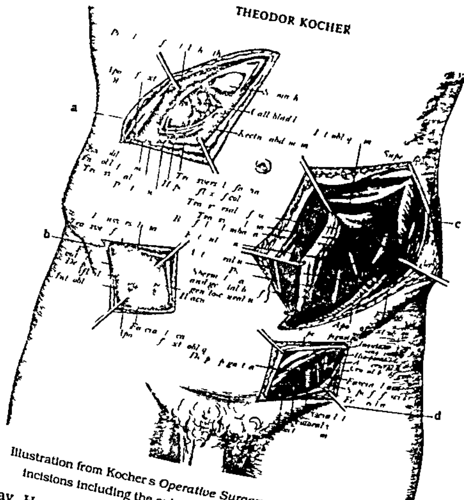


Illustration from Kocher s *Operative Surgery* of various abdominal incisions including the subcostal exposure of the gall bladder

used to this day He popularised the collar incision for thyroid ectomy which bear[s] his name and which replaced the ugly vertical midline incision used by previous surgeons In it he also describes the technique for mobilisation of the duodenum by division of its lateral peritoneal attachments for which Americal surgeons have invented the phrase Kocherisation of the duodenum

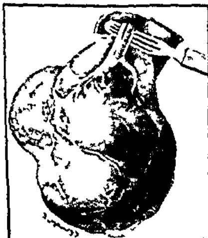
In 1870 he wrote a long article describing his method of reduction of a disolacted shoulder still popular today which could be carried out almost painlessly without anaesthesia or assistance

Bend the arm at the elbow press it against the body rotate outwards till a resistance is felt lift the externally rotated upper arm in the sagittal plane as far as


The collar incision for thyroidectomy

possible forwards and finally turn inwards slowly

However it was Kocher s contributions to the surgery of the thyroid gland which constitute his greatest claim to fame and earned him his Nobel Prize in 1909 Switzerland being mountainous and land bound is an iodine-deficient region enormous goitres often associated with cretinism were endemic before iodination of table salt was introduced There was therefore a tremendous pool of patients requiring Kocher s meticulous surgical technique which he developed for thyroidectomy His mortality rate fell from 12 8 per cent in 1883 to less than 0 5 per cent and in one consecutive series of 600 cases there was but a single death

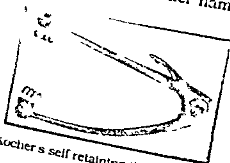




At the start of his surgical career very little was known of the function of the thyroid and in his early series Kocher performed total thyrodectomies in the majority of cases However Reverdin of Geneva reported that patients subjected to total thyroidectomy developed a condition which was soon identified as being similar

Jacques Louis Reverdin, 1842 1929 Professor of Surgery Geneva First pointed out the close resemblance between patients following total thyroidectomy and cases of myxoedema
Kocher s self retaining thyroid retractor
Sir Felix Semon, 1849 1921 Laryngologist, St Thomas Hospital, London
Sir Victor Horsley

to cretinism and myxoedema Kocher reviewed his own patients and confirmed this finding on those submitted to total thyroidectomy Patients who had only had partial resections escaped this condition which Kocher named cachexia strumipriva He wrote



Kocher s self retaining thyroid reactors

As a rule soon after discharge from the hospital but in occasional cases not before the lapse of four or five months the patients begin to complain of fatigue and especially of weakness and heaviness in the extremities In addition there is a sensation of coldness The mental alertness decreases Childern who were formerly among the brightest pupils suddenly fall back There is gradually increasing slowness of speech and of all other movements If we are to give a name to this picture we cannot fail to recognise its relation to idiocy and cretinism the stunted growth the large head the swollen nose thick lips heavy body and clumsiness of thought and speech undoubtedly point to a related evil

The importance of the thyroid gland to normal life was established and from then on Kocher carried out only sub-total resections for benign thyroid disease

It was Felix Semon a laryngologist at St Thomas Hospital who concluded in 1883 that cachexia strumipriva myxoedema and cretinism were all due to the same cause loss of thyroid function and this was confirmed by the animal studies of Victor Horsley at the Brown Institution

Many of the instruments we use today in thyroid surgery were invented by Kocher—his gland dissector his pedicle artery forceps provided with a rat tooth at their tips and his self retaining thyroid retractor

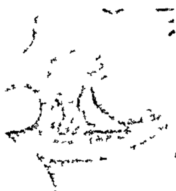
Kocher was a master surgeon who preached careful diagnosis and gentle precise operative technique He was a serene person and the atmosphere of serenity pervaded his operating theatre Truly he was one of Switzerland s finest sons



KOPLIK'S SPOTS

HENRY KOPLIK 1858 1927

It is indeed very late in the day to describe something new connected with the exanthemata said Henry Koplik in the original description of Koplik s spots which is to be found in an article in the *Archives of Pediatrics* of New York 1896 13 918 having made his observations at the Good Samaritan Dispensary New York At the time Koplik was 38 years old



Koplik s Spots

After describing the prodromal symptoms of measles Dr Koplik continues On the buccal mucous membrane and the inside of the lips we invariably see a distinct eruption It consists of small irregular spots of a bright red colour In the centre of each spot there is noted in strong daylight a minute bluish white speck These red spots with accompanying specks of a bluish white colour are absolutely pathognomonic of beginning measles and when seen can be relied upon as the forerunner of the skin eruption Typically the spots appear on the second day of the fever the rash not appearing till the fourth day Presumably they occur throughout the gastro- intestinal tract because they have been observed on the exposed mucosa

of a colostomy!

Two years later Dr Koplik published a second paper on the same subject and recorded 16 cases which were diagnosed by the aid of my spots

Measles had been studied for centuries but no physician before Koplik appears to have realised the importance of these spots as a diagnostic sign

Even after the publication of Kopliks papers a considerable time elapsed before the sign became well known and as so often happens it had a better reception abroad than in the country of its origin It has been well said that the history of measles may be divided into *before and after* koplik At the present time Kopliks spots are recognised by every medical practitionr and every medical student the world over as being a pathognomic sign of measles but how many know that the man whose Estern European name they perpetuate was born bred and worked in New York City?

Henry Koplik was born in New York City He was educated at the College of the City of New York and at Columbia University and after taking his medical degree in 1881, he studied in Berlin Vienna and Prague Almost the whole of his professional life was spent in the study of childern s diseases For 25 years he was Attending Paediatrician to the Mount Sinai Hospital New York

He was one of the founders and sometime President of the American Pediatric Society In 1889 at the Good Samaritan Dispensary he established the first sterilised milk depot for infants in America

His book on *The Diseases of Infancy and Childhood* appeared in 1902 and went through four later editions

A big bluff good natured man with a white Vandyke beard he was one of the most popular as well as respected physician of New York

He died of a coronary thrombosis while in his sixty ninth year



LANE'S PLATES

LANE'S INTESTINAL CLAMPS

LANE'S TISSUE FORCEPS

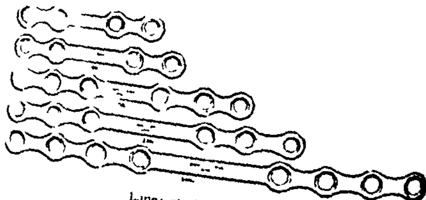
SIR WILLIAM ARBUTHNOT LANE 1856 1943

Arbuthnot Lane was a brilliant technical surgeon whose dexterity was probably only equalled by Moynihan He made many important contributions to surgery but he was not himself a great initiator of ideas rather he adapted and popularised many important aspects of surgical techniques Undoubtedly his greatest contribution was his work on the open fixation of fractures This was not a new concept of course Lister himself for example had carried out wiring of the fractured patella However it was Lane who pioneered the use of screw fixation of fractures which he commenced in 1893 and by 1905 he had introduced his special perforated (Lane s plates) for plating fractures of the long bones

Of course any infection in such instances would prove disastrous and in other hands there were many failures Lane however introduced the strictest asepsis into his theatres the no touch techniques For this he devised long artery and dissecting forceps so that even in the deepest wound the fingers that held them could not touch the wound edges The sutures were never touched but were threaded using two pairs of dissecting forceps This asepsis was combined with meticulous haemostasis and the gentlest handling of the tissues

Although in his day Lane came in for heavy criticism for converting closed fractures into open wounds modern operative orthopaedic surgery owes a great deal to his early efforts

Lane was born in 1846 at Fort St George Scotland He was the son of an army surgeon and as a child he accompanied his parents to India Corfu Malta (where one of his brothers died of cholera) and Nova Scotia He entered Guys Hospital at the early age of 16 and spent long hours in the dissecting room being



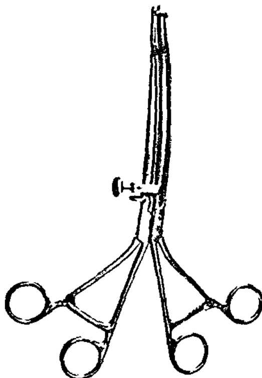
Lane s steel bone plates

appointed an Assistant Demonstrator while still a student Willie as he was known
to all his family and friends throughout his life qualified in 1877 at the age of
21 and was appointed House Surgeon to the Victoria Hospital for Childern Tite
Street in Chelsea and it was here that he made his first contribution to operative
surgery he published five cases of rib resection for chronic empyema in childern
with four successes In 1882 he returned to Guys as Demonstrator of Anatomy
and stayed there until 1887 while serving at the same time on the straff of the
Hospital for Sick Childern Great Ormond Street Lane liked nothing better than
to demonstrate his prowess as a dissector Indeed the students would say Don t
let Lane touch your part or you will have nothing of it left His careful dissections
often carried out late into the night demonstrated how the skeleton might undergo
curvature in relation to prolonged heavy labour and he coined the term the skeleton
represents crystallisation of lines of force He published papers on the anatomy of
the charwoman and the shoemaker

While still a Demonstrator on a salary of £ 200 a year he married and had a
happy family life with three daughters and a son

In 1888 he was elected to the staff at Guys Hospital and served it until his
retirement in 1920

At Guys and Great Ormond Street he made important technical advances in
many branches of surgery He introduced exploration of the mastoid antrum in the
treatment of chronic purulent otitis media for which he devised special chisels and
gouges He devised an igneious flap operationf or cleft plate repair and advocated
operation in the earliest weeks of life inventing special fine needles to suture the
delicate tissues He was the first to treat septic thrombosis of the lateral sinus



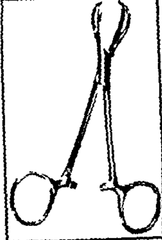
Lane s twin intestinal clamps for bowel anastomosis

complicating aural sepsis by ligature of the internal jugular vein and removal of the septic thrombus This he carried out in August 1888 the child being a descendant of Admiral Nelson He was an early advocate of the use of saline for transfusion in haemorrhage in the days before blood was available In 1896 he reported the successful removal of a brain tumour and in 1909 he developed an operation for excision of cancer of the cervical oesophagus with repair of the defect by means of skin flaps

Among Lane s achievements must be placed the fact that he was the first to perform a successful cardiac massage which he reported in 1902 The patient was a man of 65 undergoing appendicectomy

During the trimming of the stump both pulse and respirations stopped together Artificial respiration and traction on the tongue were performed without result Then the surgeon introduced his hand through the abdominal incision and felt the motionless heart through the diaphragm He gave it a squeeze or two and felt it restart beating

Sir Harold Delf Gillies 1882 1960 New Zeland born pioneer of plastic surgery in both World Wars Consultant Surgeon St Bartholomew s Hospital, London



Lanes tissue forceps

The operation was completed and the patient recovered fully Lane also devised the simpler method of resuscitation in small infants by squeezing directly on the elastic chest wall

Lane was deeply interested in abdominal surgery He devised his non-crushing intestinal twin clamps which could be screwed together enabling side to side anastomoses between loops of bowel to be made with ease and this instrument is still in daily use in our operating theatres as are his tissue forceps

Early in the 20th Century Lane started to become obsessed with the idea of chronic constipation producing toxaemia and being the cause of many of the ills of civilisation He belived We suffer and die through the defects that arise in our sewerage and drainage system He first carried out short circuiting of the large intestine in such cases (which came to be known as Lanes operation) and then went even further and carried out total colectomies in patients suffering from such conditions as migraine and rheumatism Fortunately at a later date Lane preached that one might keep the colon as long as it was kept empty and introduced liquid paraffin which at least was safer to the patient than having a total colectomy Naturally his views met with considerable opposition Eventually Lane took his name off the Medical Register in order to be able to addres the public by lectures and through the press of his ideas for health He was indeed a pioneer in what we now call Social Medicine He founded the New Health Society whose principal aims were to teach the public the simple laws of health to attempt to make fruit and veigetables abundant and cheap for the general public and to encourgae people to go back to the land He started the journal *New Health* in 1926 and wrote a popular

book *New Health for Every Man* when he was 75 years of age

Lane was created a Baronet in 1913 During the First World War he became a consultant surgeon in the army and organised the Queen s Hospital at Sidcup for the treatment of facial injuries It was here with a young New Zelander Harold Gillies that the foundations of modern plastic reconstructive surgery were laid

Willie s first wife died in 1935 six months after their Golden Wedding In the same year he re married at the age of 79 and went on lecturing until the outbreak of World War II Even then he went daily to the Athenaeum to read the papers He died on 16th January 1943 at the age of 86



LEISHMAN-DONOVAN BODIES

SIR WILLIAM BOOG LEISHMAN 1865-1926
CHARLES DONOVAN 1863 1951

Leishman Donovan bodies are small round or oval bodies found in the spleen bone marrow and liver and patients suffering from kalaazar a tropical disease characterised by anaemia irregularly remittent fever and emaciation The bodies are the intracellular forms of the protozoan parasite *Leishmania donovani* which causes the disease



Leishman Donovan bodies in a smear of bone marrow (x720)

William Boog Leishman was born in Glasgow the son of William Leishman a distinguished obstetrician of that city William Leishman Junior was educated at Westminster School and at the University of Glasgow where he graduate M B C M in 1886 In 1887 he entered the army medical service and he spent several years in India before being posted in 1899 to the Army Medical School at Netley He had taken with him to India a microscope and had grasped every opportunity of becoming proficient in its use At Netley he spent a great deal of his spare time in the pathological department then under the direction of (Sir) Almroth Wright He was able to watch the development of Wright s researches on antityphoid vaccination in which he was later to take an important part In 1900 he was appointed Assistant Professor of Pathology at Netley and at this time he elaborated the stain for blood

now known universally as Leishman s stain

Leishman made his great discovery in the following ways

In 1900 Private B invalided from India with attacks of pyrexia anaemia and enlargement of the spleen was admitted to Netley Hospital for investigation and treatment Among other examinations Leishman performed splenic puncture stained the resulting specimen with his stain and saw an enoromus number of heavily stained rounded and oval bodies int he splenic cells and in the red blood cells He searched the literature but could find no comparable finding and he was nonplussed Many months later he was examining the blood liver and spleen of a rat dead of trypanosomiasis bodies identical in shape size and staining reaction to those found in the case of Private B were unmistakably present

It was now 1903 and he published a short note of his findings in the *British Medical Journal* Captain Charles Donovan confirmed the findings in Madras Sir Ronald Ross the same year proposed that the bodies be called *Leishman Donovan bodies* and the parasite *Leishmania donovani* and this nomenclature has been adopted throughout the world

Thereafter Leishman made a number of other important discoveries in the field of tropical medicine He rose rapidly to the highest rank that the Royal Army Medical Corps can offer and after filling with distinction the Chair of Pathology at Millbank Military Hospital he becameDirector General of the Army Medical Services He received the honour of Knighthood in 1909 and was elected a Fellow of the Royal Society in 1910 In 1926 General Sir William Leishman died at the age of 61 years after a short illness

Charles Donovan graduated M D at the Royal University of Ireland in 1889 Soon after qualification he entered the Indian Medical Service At the time that he confirmed Leishman s discovery (1903) he was a Captain and was second physician at the Government General Hospital Madras It must be not lost sight of that in 1905 Charles Donovan made a discovery of even greater moment than with which his name is jointly associated and which has been described above Donovan quite independently found the cause of granuloma inguinale (syn granuloma venereum) venereal disease rarely seen in England until the West Indians began

William Leishman 1833 1894 Regius Profesor of Midwifery Glasgow
Sir Almroth Wright, 1861 1947 Professor of Bacteriology St Mary s Hospital London pioneer of anti typhoid inoculation
Sir Ronald Ross 1857 1932 Director Ross Institute for Tropical Diseases London proved that malaria was carried by the anopheles mosquito

to immigrate in substantial numbers (1956 1958) Granuloma inguinale which must not be confused with lymphogranuloma inguinale is caused by the *Donovania granulomatis* a Donovan body found characteristically in the cytoplasm of white blood cells particularly the large mononuclear leucocytes Granuloma inguinale gives rise to a painless swelling or bubo which later breaks down the form an ulcer predominantly in the inguinal region



Lieutenant Colonel Charles Donovan



Granuloma igulnale

In 1906 Major Donovan was appointed Civil Superintendent of Royapettah Hospital—a post that carried with it responsibility for the medical care of Government servents living in the district of Madras city This hospital had 80 beds and the post suited Donovan s independent character and gave him leisure to

pursue research In addition he held the post of Professor of Physiology at Madras College

Apart from the great discoveries described above Donovan was convinced that carries of many of the tropical diseases in the Madras Residency were to be found among the denizens of the Jungle and he spent his holidays collecting blood slides to prove the existence of monkey malaria

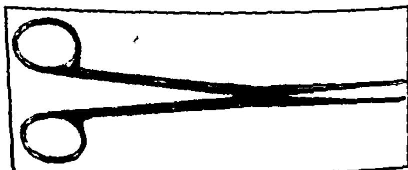
It is truly remarkable that while his co-discoverer in the Army was promoted with unprecedented rapidity Donovan in the I M S remained a Lieutenant Colonel Possibly it was for this reason that in 1920 when he was 57 years old he resigned and went to live in the village of Bourton on the Water Gloucestershire where he died at the age of 88 years

LISTER'S SINUS FORCEPS

LISTER'S TUBERCLE

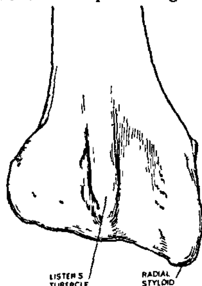
LORD LISTER
1827-1912

Lister was undoubtedly the greatest surgical benefactor of mankind Indeed we classify surgery into its pre and post Listerian eras Before Lister it was almost unknown for a surgical wound to heal primarily—suppuration was the norm But local sepsis was the least of the dangers septicaemia pyaemia erysipelas tetanus and gas gangrene would sweep through the surgical wards Hospital gangrene a condition now no longer seen was perhaps the most dreaded of all complications the tissues around the wound would become grey or black the process would spread rapidly and death was almost inevitable Surgeons expected to lose a third of their case of amputation and one is not surprised that usually operations were only resorted to as a last resort It was Lister s work that changed all this and heralded the modern age of surgery It is perhaps surprising that his name is only perpetuated emponymously in a useful dressing instrument which he devised and the dorsal tubercle on the posterior surface of the distal end of the radius adjacent to the groove for extensor pollicis longus



Joseph Lister was born in 1827 in the pleasant country property of Upton Park

in the Parish of West Ham in Essex today the site is a block of council flats called Joseph Lister Court in the East End of London His father Joseph Jackson Lister was a prosperous Quaker wine merchant and a distinguished amateur microscopist He developed the achromatic microscope which gained him the Fellowship of the Royal Society

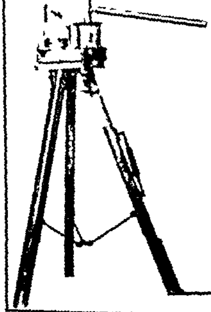


The dorsal (Lister s) tubercle of the radius

In 1844 young Joseph aged 16 entered University College the Godless college which took members of any religious belief unlike Oxford and Cambridge where membership of the Chruch of England was obligatory Here he took his B A in Arts but switched to Medicine and graduated M B in 1852 In the same year he achieved his F R C S He obviously inherited his father s interest in the microscope and in 1853 made the discovery that the involuntary muscle of the iris contained both dilator and constrictor fibres

In September 1853 at the age of 26 Lister went on what was intended to be a short visit to study under James Syme Professor of Clinical Surgery at the Edinburgh Royal Infirmary in fact he was to stay in Scotland for many years Syme and Lister were immediately attracted to each other the young man was rapidly appointed his House Surgeon and within a year Lister was appointed to the surgical staff At the same time he married Agnes Syme his chief's eldest daughter Although they had no childern this was an ideal partnership of 37 years

In 1860 Lister was appointed Professor of Surgery in the University of Glasgow and a year later took charge of beds at the Glasgow Royal Infirmary It was at



Lister s carbolic spray

Glasgow that Lister entered his most productive period He devised his screw tourniquet for compressing the *abdominal aorta* a hook for removing foreign bodies from the ear scissors with blunt probe shaped tips for cutting bandages and his forceps for probing and packing narrow sinuses which are in constant use to this day In 1865 he published his important paper on excision of the wrist for tuberculosis in the *Lancet*, a most valuable contribution since it avoided amputation and left the patient with a tolerably useful hand The dorsal tubercle on the distal extremity of the radius a surgical landmark in this operation now bears Lister s name

Since his early days in Edinburgh Lister had been interested in inflammation and it was there that he commenced his study on the microscopic changes accompanying inflammation which he carried out on the foot web of the frog He was aware of Pasteur s work in 1864 which showed that broth would only putrefy when exposed to dusty city air but not to the clean air of the mountain top Lister himself demonstrated that urine kept fresh when contained within a flask provided with an angled neck but decomposed in a straight necked bottle which allowed contamination of the contents Surely it was the germs as they were called that produced putrefaction in wounds just as they produced fermentation in wine or decomposition of contaminated broth or urine At this time no one had actually



Lister s statue In Portland Place London

seen the bacteria which cause suppuration and it was to be some years before Robert Koch was to demonstrate that specific diseases could be attributed to specific organisms

The problem confronting Lister was to prevent germs from entering the wound At this time there were newspaper accounts of the use of carbolic acid to purify the sewage in Carlisle and it was carbolic acid that Lister decided to use in his first clinical experiments The crucial trial was on the 12th August 1865 when James Greenlees aged 11 was admitted with a compound fracture of the left tibia This was treated by a thorough cleaning with carbolic acid and then dressed with lint soaked in the solution The result was a complete success and Lister wrote 'The remarkable retardation of suppuration and the immediate conversion of the compound fracture into a simple fracture with a superficial sore were most encouraging Lister waited until 1867 to report his trial by which time 11 patients had been treated for compound fractures with nine complete successes One paitent developed hospital gangrene during Lister s absence and required amputation and another although progressing satisfactorily died of haemorrhage as a result of perforation of femoral artery by a fracture fragment It can truly be said that the publication of these results marked the watershed between the old and the new era of surgery

Lister went on to apply his technique to the drainage of tuberculous abscesses the ligation of major vessels for which he first used silk soaked in carbolic and then switched to carbolic treated catgut and then most daringly of all open fixations of fractures of the patella and olecranon using silver wire

It must be admitted that Lister s techniques were only slowly adopted by most British surgeons and were accepted more readily by his European colleagues However Lister devoted the rest of his clinical life to perfecting his techniques experimenting with the use of a carbolic spray (much to the discomfort of the surgeon and his assistants) and the use of other antiseptics including perchloride of mercury and boric acid

In 1869 his father in law Professor Syme had a stroke and Joseph Lister succeeded him as Professor of Surgery In 1877 Lister was invited to become Professor of Surgery at King's College Hospital and decided to make the move of London in order to preach his antiseptic surgery in the Metropolis

In his later years Lister was showered with honours He was created surgeon to Queen Victoria in 1878 and indeed drained her axillary abscess using the antiseptic principle— a most unpleasant task most pleasantly performed the Queen said after the operation In 1883 he was made a Baronet and in 1897 created a Peer the first occasion in which a doctor had been so honoured In 1895 he became President of the Royal Society (he had been made a Fellow at the early age of 33) He served on Council of the Royal College of Surgeons from 1880 to 1888 but was never its President

Lister died peacefully on the 10th February 1912 He left clear instructions that he was to be buried beside Lady Lister in West Hampstead cemetery where there was a simple and private funeral There is a fine statue in his memory in Portland Place a short walk from his London home in Park Crescent on which has been placed a commemorative plaque

In the public memorial service in Westminster Abbey on February 16th 1912 the choir sand Handel s anthem whose words were particularly appropriate

Kindness meekness and comfort were in his tongue His body is burried in peace but his name liveth evermore



LISTON'S BONE FORCEPS

LISTON'S SPLINT

ROBERT LISTON
1794-1847

Liston s long splint is not now used in the treatment of fracture of the femur but it was the standard treatment for such fracture for nearly a hundered years the decline in its use commencing just prior to the 1914 18 war during which period it was replaced by the Thomas splint Liston s bone forceps are still in common use

Robert Liston was born at Ecclesmachen in Linlithgowshire Like many other great Scotsmen he was a son of the manse

In 1810 at the age of 16 Liston went to Edinburg to become a pupil of John Barclay a well known anatomist. The lad s ambition was to become a surgeon and he threw himself whole heartedly int his anatomical studies He studied surgery at Edinburgh Royal Infirmary the London Hospital and St Bartholomew s Hospital becoming a member of both the London and Edinburgh College of Surgeons in 1818

For a time Liston acted as demonstrator in Barclây s classes but in 1819 he and his friend and cousin James Syme decided to found a school of anatomy and surgery of their own This endeavour was hampered by the extereme difficulty of obtaining bodies for disssection in Edinburgh but in spite of these difficulties Liston and Syme carried on their school with great success for five years

Meanwhile Liston acted as a surgical clerk at the Royal Infirmary attending the wards and out patient departments and watching operations with the undergraduate students At the same time he was gaining experience as an operating surgeon in a private capacity he showed remarkable ability and his fame spread especially among the poor of Edinburgh As he had no official status at the Royal Infirmary his

John Barclay 1758 1826 M D Edin F R C P Edin Lecturer on Anatomy and Surgery at Edinburgh He was at first a private lecturer bt in 1804 was formally recognised by the Royal College of Surgeons of Edinburgh

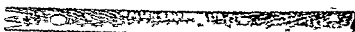
operations were performed at the homes of his patients with the able assistance of Syme



Liston s Bone Forceps

Naturally this state of affairs did not please the surgical staff of the Royal Infirmary who grew jealous of the young man s reputation They began a campaign against him which cluminated in a letter from the manager of the Royal Infirmary forbidding him to visit there on the grounds that his presence was not compatible with the smooth working of the surgical department Liston appealed against his dismissal but he could not get an adequate hearing As a result his surgical career was severely hampered for five years (1822 27) and incidentally the Royal Infirmary was deprived of the service of a brilliant surgeon

During this time of comparative exile Liston wrote many papers and in one of them advocated the use of the splint which bears his name

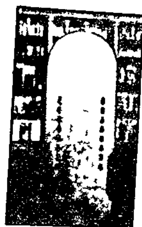


Listons Long Splint

Another unfortunate incident during this period was Liston s quarrel with Syme The two men had been devoted friends and colleagues until 1823 but professional rivalry caused an increasing coolness and finally there was an open breach There was no reocncililation for nearly a quarter of a century In fact when it did come Liston had but a few months to live

In 1827 the authorities relented and appointed Liston surgeon to the Royal Infimary In 1833 however Syme defeated him in a contest for the Chair of Clinical Surgery at the University of Edinburgh and when the Professorship of Surgery at University College London became vacant in 1834 Liston applied for a post and obtained it. He was also appointed surgeon to the North London (later University College) Hospital In London he was received with great enthusiasm and speedily built up a large private practice

The operating table upon which Liston performed
the first operation under ether in Europe Note
the holes for ropes used to restrain the patient
in preanaesthetic days



It is an interesting fact that the first major operation to be performed under ehter anaesthesia in England was at University College Hospital by Liston on December 21st 1846 This was a mid thigh amputation The patient was Frederick Churchill a butler suffering from osteomyelitis of the tibia following a severe injury After it was over Liston turned to the crowded audience and said 'This Yankee dodge gentlemen beats Mesmerism hollow Churchil made a complete recovery

A tall man powerful in form dressed in a dark bottle green coat with velvet coloar double breasted shawl vest grey trousers and Wellington boots the thumb of one hand struck in the armhole of his vest comes along in an easy going way chewing an orangewood tooth pick That was the description of Robert Liston by a contemporary His manner except to his patients was brusque and rough and it has been said that he was a teacher more by what he did than by what he said He was a brilliant and very rapid operator the latter attribute being of fundamental importance before the days of anaesthesia He wanted to instruct his assistants to stand stop-watch in hand and time him while he performed a major operation

Liston was very fond of outdoor sports and up to three months before his death rode to bounds like Nimrod

He died suddenly on 7th December 1847 at the age of 53 as the result of an aneurysm of the aorta His grave is in the cemetery on Highgate Hill

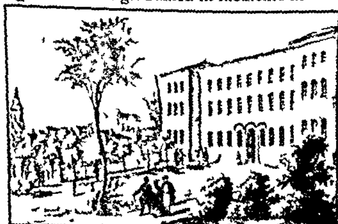


LUDWIG'S ANGINA

WILHELM FRIEDRICH VON LUDWIG 1790-1865

Ludwig described his Angina over 120 years ago

Wilhelm Friedrich von Ludwig was born near Stuttgart in what was then the Duchy of Wurttemberg He was apprenticed to a surgeon and later studied at the University of Tubingen where he graduated in medicine in 1811



The University Clini University of Tubingen in Ludwig's day

These were the stormy times of the Napoleonic Wars and Wurttemberg had taken arms on the side of France Its ruler Frederick II had joined Napoleon in his campaigns against Prussia Austria and Russia and directly young Ludwig qualified he joined the army as assistant surgeon The following year he was in charge of a field hospital on the Russian front and after the battle of Vilna he was taken prisoner by the Russians and remained in captivity for two years

We next hear of him back at Tubingen where he applied successfully for the Professorial Chair of Surgery and Midwifery Before taking up his appointment he

visited Vienna and other medical centres

On his return to take up his new duties he was made personal physician to King Frederick He appears to have combined the offices of Court Physician and Professor of Surgery and Midwifery in the university with signal success



Ludwig's Angina The brawny swelling beneath the jaw and the oedema of the floor of the mouth are characteristic features of the condition

It was in 1836 20 years after he had been appointed to the Chair of Surgery that he made his first contribution to medical literature This was a paper upon a form of inflammation of the neck It was largely inspired by observations upon no less a personage than Queen Catherine of Wurttemberg Three years later another German surgeon writing on the same subject named the condition Ludwig's Angina This clinical entity comprises massive inflammatory swelling in the submandibular region and the floor of the mouth It is due to a fluminating infection of the tissues surrounding the submandibular salivary gland Unless rapidly treated the patient may die from oedema of the glottis In its earliest stages the inflammatory swelling may subside on antibiotic treatment In more advanced cases a deep incision must be carried out below the mandible and deepened through the mylohyoid muscles to decompress the tissues in the floor of the mouth Ludwig made practically no other contribution to medical or surgical literature but his name lives on in this one clinical observation

The last year of his life were overshadowed by the double affliction of catract and stone When he died in 1865 he left the greater part of his large fortune to found

a hospital for the poor in Wurttemberg This was opened in 1874 for 50 patients and has since been greatly enlarged



LUGOL'S SOLUTION

JEAN GUILLAUME AUGUSTE LUGOL
1786 1851

Jean Guillaume Auguste Lugol was born on 10th August 1786 at Montauban Tarn-en Garonne He graduated M D Paris in 1812 and seven years later was appointed to the staff of the Hospital St Louis

At Paris he gave courses of lectures on pathology but the great interest of his life was the study of the condition known in his day as scrofula—a collective term applied to tuberculous lymph nodes and tuberculous bones and joints before it was known that these conditions were caused by the same organism as that which cause pulmonary tuberculosis

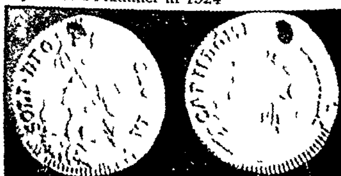
Scrofula has a most interesting history It is the disease known for centuries as the King's Evil because it was believed that anointed monarchs could cure suffers from the malady by touching them It is said that between 1662 and 1682 Charles II touched over 92 000 suffers from the King's Evil Every person touched was given a gold coin

Lugol s first Memoir on the Use of Iodine in Scrofulous Diseases was read before the Royal Academy of Sciences of Paris in 1829 His treatment comprised fresh air exercise, cold bathing and drugs Above all he placed his faith in iodine therapy His aqueous solution of iodine (liquor iodide aquos) for oral administration consists of 5 per cent of iodine 10 per cent of potassium iodide and distilled water to make 100



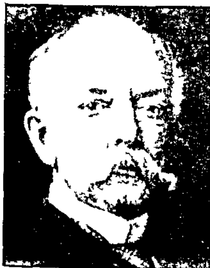
Charles II touching for the King's Evil

Lugol s solution is not now considered to be of any value in the treatment of tuberculous conditions At the present time this solution is used mainly in the pre operative treatment of thyrotoxicosis (Graves s Disease) its value in this respect being pointed out by Dr H S Plummer in 1924



Touchpiece of Charles II (gold) (Raymond Crawford)

Lugol s works were translated into English in 1831 and at that time attracted much attention He made no other outstanding contribution to medicine and died at Geneva on 16th September 1851 His laborious researches on scrofula are now forgotten but his solution keeps his memory alive



MCBURNEY'S POINT

CHARLES MCBURNEY 1845-1913

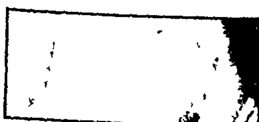
Charles McBurney was one of that brilliant band of surgeons who laid the foundation of the knowledge of acute appendicitis It was Reginald Fitz who first established the true nature of the disease coined the term appendicitis and as a physician advised his surgical colleagues that urgent symptoms demand immediate exposure of the perforated appendix and its treatment according to surgical principles Following Fitz s epoch making paper of 1886 several American surgeons made further contributions to the diagnosis and treatment of this new disease McBurney was one of the most prominent of these pioneers He described the point of maximum tenderness in acute appendicitis in the *New York Medical Journal* in 1889 His instructions are explict It should he said be *determined by pressure of one finger* and the point lies $1\frac{1}{2}$ inches from the anterior superior iliac spine on a straight line drawn from that process to the umbilicus



McBurneys Point

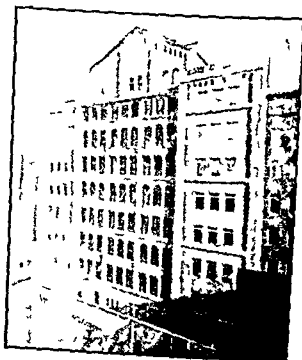
McBurneys muscle splitting or grid iron incision for appendicectomy was first described in 1894 He claimed that it gave a more direct approach to the vermiform

appendix and that it reduced the incidence of post-operative incisional hernia. Time has proved the truth of both these assertions and today the grid iron incision is employed for appendicectomy more often than any other incision



The scar of McBurney's incision for appendicectomy

At the present time in the world there must be hundreds of thousands of individuals who bear the scar of a McBurney s incision on the right lower quadrant of the abdomen To them and to their surgeons McBurney is indeed a name that must not be allowed to wither



The Roosevelt Hospital New York



Charles McBurney was born in Roxbury Massachusetts He received the benefits of a splendid education Graduating in Arts from the University of Harvard in 1886 he proceeded to New York and obtained the M D degree from the College of Physician and Surgeons of New York City in 1870 After two years post graduate study in Europe he commenced practice in New York in 1873 Soon afterwards at the age of 28 he was appointed assistant demonstrator of anatomy at the College of Physicians and Surgeons McBurney was elected assistant surgeon to the Bellevue Hospital in 1880 and in 1888 at the age of 43 he was appointed Surgeon in Chief at the Roosevelt Hospital It was not long before this hospital became the Mecca of surgeons from all parts of the world

Charles McBurney was a surgeon of outstanding ability and was recognised as one of the leading abdominal surgeons of his day He published more than 100 papers on surgical subjects but there is no doubt that his chief claim to fame is his description of McBurney s point

McBurney was a fine handsome man He was devoted to outdoor sports and was an expert shot and salmon fisherman At the age of 68 he died suddenly of coronary thrombosis while on a hunting trip

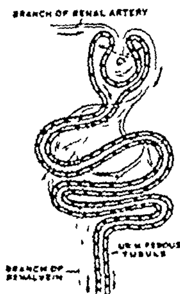


THE MALPIGHIAN BODIES

THE MALPIGHIAN LAYER OF THE SKIN

MARCELLO MALPIGHI
1628 1694

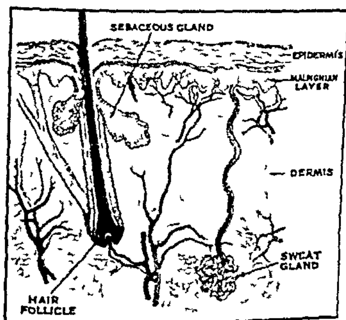
When we speak of the Malpighian bodies—the small bodies that can be seen with the naked eye on sectioning the kidney consisting of an envelop containing terminal globular plexuses and a network of blood vessels around the commencement of the uriniferous tubules—we commemorate the name of Marcello Malpighi the founder of Microscopical anatomy





Statue of Malpighi in the University of Bologna

circulation of the blood complete It can be said that he lighted a torch of knowledge that has never been extinguished



Marcello Malpighi was born near Bologna He studied at the famous university near his birthplace and qualified in medicine when he was 25 years of age He must

TOPL

of Charles X of France had landed near Marseille in April 1832 in an attempt to secure the throne for her 11-year-old son Her followers were captured and imprisoned in the castle of Blays Meniere found that the Duchess was pregnant and in due course she gave birth to a daughter the fruit of a secret marriage to an Italian nobleman The discovery of this marriage and the arival of the baby deprived the Duchess of the sympathies of her supporters No longer an object of fear to the French government, she was released and Meniere accompanied her to Naples

Upon his return to Paris Meniere acted for a short time as assistant to Professor Chomel

In 1835 he was sent to the departments of Aude and Haute Garonne to supervise measures for the prevention of cholera which was epidemic at the time In 1837 he applied for the vacant professorship of medicine and hygiene writing a brilliant thesis on clothing and cosmetics He was unsuccessful but in the following year he secured the appointment of physician in chief to the Institution for Deaf Mutes

Henceforth his professional work lay almost entirely in the field of otology

Meniere was a well known figure in the intellectual world of Paris and was intimate with Balzac Victor Hugo and other great writers as well as with the leading medical men He was himself a highly cultured man and his life long study of the Greek and Latin classics was responsible for two learned volumes on *Medical Studies on the Latin Poets* and on *Cicero as a Physician*

Meniere married in 1838 Mlle Becquerel a member of the same family as Antoine Becquerel the discoverer of radioactivity Their son Dr Emile Meniere was also a noted otologist Prosper Meniere died on 7th February 1862, of influenzal pneumonia

Auguste Francois Chomel, 1788 1858 Professor of Clinical Medicine and Physicine to the Hotel Dieu Paris

Honore de Balzac 1799 1850 Famous French novelist Author of over 80 books depicting every phase and aspect to French life

Victor Hugo 1802 1885 Famous French dramatist and novelist Author of world renowned classics such as Les Miserables

Marcus Tullius Cicero 106 43 B C A great Roman orator and philosopher

Antoine Henri Becquerel, 1852 1908 Professor of physics at the Ecole polytechinique Paris In 1903 he was awarded the Nobel Prize for Physics jointly with Pierre and Marie Curie

have been a young man of outstanding merit for within three years he obtained a professorship at his own university He had hardly taken up his duties when he was invited to fill the Chair of Physic at Pisa This he accepted

Malpighi was not strong and he found that the climate of Pisa affected his health adversely consequently at the end of three years he returned to Bologna Back at the city of his birth he taught and worked in an extramural capacity for some years Finding however that follwing his resignation all doors of the University were now closed to him in his beloved Bologna he acceded to an offer to fill the Chair of Physic at Messina None the less history repeated itself and after a few years he found the post so displeasing that in spite of all efforts to retain him he insisted on returning *once more to Bologna He remained at Bologana until 1691 when he accepted* a summons from Pope Innocent XII to become Physician in Chief and Chamberlain at the Papal Court in Rome

Malpighi himself appears to have been an attractive personality He was certainly beloved by his pupils and respected by his contemporaries This did not prevent him becoming involved in bitter quarrels In one particular feud between his family and a neighbouring clan his nephew was killed The particular interest to posterity of these circumstances is that during one of the periodic quarrels the original manuscript of years of histological observations was wantonly destroyed by a malicious relative



Malpighi s Microscope

Malpighi and his work early recognised in England he was elected a Fellow of the

Antonj van Leeuwenhoek, 1632 1723 a draper of Delft in Holland He devoted his leisure to microscopical studies grinding his own lens and constructing his own instruments The most powerful of the 26 microscopes which Leeuenhoek bequeathed to the Royal Society had a magnifying power of 160 After his daughter s death in 1745 the rest of his microscopes were sold, and among them was one the magnifying power of which was no less than 270

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MOYNIHAN'S GALL-BLADDER FORCEPS

MOYNIHAN'S GUTTER

LORD MOYNIHAN 1865 1936

Berkeley George Andrew Moynihan came of Irish stock His father Andrew was a remarkable man who won the Victoria Cross in the Crimean War as a sergeant he killed five Russians and rescued two officers under fire during an attack on the Redan Most unusually in those days he was commissioned from the ranks and eventually became a Captain only to die in Malta of Malta fever when Berkeley was only a year old The future surgeon was taken by his mother back to her parents in Leeds As time went on he became a blue-coat boy a pupil at the famous school, Christ s Hospital His first intention was to follow the family tradition and enter the Army or Navy but he changed his mind and decided to study medicine

Leeds was at that time and still is one of the leading provincial centres of surgery Moynihan carried all before him in his student career He qualified in 1887, obtained the F R C S in 1890 and was awarded a gold medal in the examination for the M S London Following qualification he held the posts of house surgeon and resident surgical officer in the General Infirmary at Leeds concurrently In 1895 at the age of 30 he married the daughter of the Leeds surgeon T R Jessop and in 1896 he was appointed Assistant Surgeon to the General Infirmary



Moynihan s Gall bladder Forceps

During these early years of his surgical career Moynihan came in daily contact

with Mayo Robson one of the foremost British pioneers in abdominal surgery and there can be little doubt that Mayo Robson was largely if not entirely responsible for laying the foundations of what proved to be an exceptionally brilliant career

Following in the footsteps of his teacher Moynihan began to publish careful observations on diseases of the stomach biliary passages intestines and pancreas and to put forward suggestions for improving the technique of abdominal operations In 1901 appeared a book on *Diseases of the Stomach* written jointly with Mayo Robson

Moynihan s growing reputation afforded him wonderful opportunities for developing special experience in the comparatively new field of abdominal surgery He made full use of these opportunities In 1904 appeared the first edition of his text book on *Abdominal Operations* a work which made his name known to surgeons on both sides of the Atlantic

In 1904 also it was Moynihan who first made use of the term hunger pain —pain eased by the taking of food and appearing two to four hours after a meal in case of duodenal ulcer

Moynihan was a wonderful exponent of gentle unhurried but purposeful surgical craftsmanship He combined this with refinements in aseptic technique and so evolved the new standards required for successful operations upon intraperitoneal organs No surgeon could have put more of his heart and soul into perfecting his technique than did Moynihan Operating was to him a ritual a sacred rite and an art His viewpoint can be caught by reading these words of his 'There is nothing in the craft of any art so exquisitely beautiful that it can surpass that shown by the skilful master of surgery



Moynihan s Gutter When a duodenal ulcer perforates soemtimes the ascending colon acts as a watersheds and directs the escaping contents to the right iliac fossa and the symptoms and signs stimulate those of acute appendicitis

Such an artist was Moynihan On one occasion the celebrated J B Murphy a hard critic was present in the operating theater at Leeds watching Moynihan perform



MOYNIHAN'S GALL-BLADDER FORCEPS

MOYNIHAN'S GUTTER

LORD MOYNIHAN 1865-1936

Berkeley George Andrew Moynihan came of Irish stock His father Andrew was a remarkable man who won the Victoria Cross in the Crimean War as a sergeant he killed five Russians and rescued two officers under fire during an attack on the Redan Most unusually in those days he was commissioned from the ranks and eventually became a Captain only to die in Malta of Malta fever when Berkeley was only a year old The future surgeon was taken by his mother back to her parents in Leeds As time went on he became a blue-coat boy a pupil at the famous school Christ s Hospital His first intention was to follow the family tradition and enter the Army or Navy but he changed his mind and decided to study medicine

Leeds was at that time and still is one of the leading provincial centres of surgery Moynihan carried all before him in his student career He qualified in 1887 obtained the F R C S in 1890 and was awarded a gold medal in the examination for the M S London Following qualification he held the posts of house surgeon and resident surgical officer in the General Infirmary at Leeds concurrently In 1895 at the age of 30 he married the daughter of the Leeds surgeon T R Jessop and in 1896 he was appointed Assistant Surgeon to the General Infirmary



Moynihan s Gall bladder Forceps

During these early years of his surgical career Moynihan came in daily contact

with Mayo Robson one of the foremost British pioneers in abdominal surgery and there can be little doubt that Mayo Robson was largely if not entirely responsible for laying the foundations of what proved to be an exceptionally brilliant career

Following in the footsteps of his teacher Moynihan began to publish careful observations on diseases of the stomach biliary passages intestines and pancreas and to put forward suggestions for improving the technique of abdominal operations In 1901 appeared a book on *Diseases of the Stomach* written jointly with Mayo Robson

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Murphy whispered to a friend that he would have travelled from America with the one object of witnessing such perfection On another occasion a French visitor after watching Moynihan s meticulous haemostasis, is reported to have remarked Is then your English blood so precious?

While we have emphasised the greatness of Moynihan as operator (probably he did more to refine surgical technique than any other British surgeon) it must not be lost sight to that he was an accomplished diagnostician and he never ceased to stress the importance of physiology and of what he termed the pathology of the living

He had remarkable descriptive powers He noted how the right paracolic gutter may allow fluid from a perforated duodenal ulcer to track into the right iliac fossa (*Moynihan s gutter*) *He gave the vivid name of* strawberry gall bladder *to the* condition of cholesterosis when the little yellow flecks of cholesterol stand out against the reddened mucosa of the gall bladder

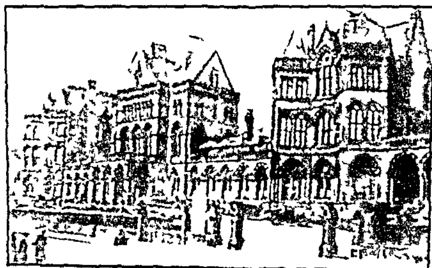
He was created Baron Moynihan of Leeds in 1929 when until then the only other surgeon to have been elevated to the peerage was Lister

By virtue of his commanding personality he was instrumental in causing the surgical profession as a whole to take notice of a number of advances that could be applied to surgery in general and abdominal surgery in particular The creation of the Association of Surgeons of Great Britain and Ireland and the launching of the *British Journal of Surgery* in 1915 were in a large measure due to his drive and imagination

As a public orator Lord Moynihan had few equals His more formal orations and addresses were prepared with meticulous care and were delivered without notes and without hesitation Audiences hung upon his honeyed words and his speeches never failed to produce a profound effect

Lord Moynihan was always interested in politics and his name was mentioned for several high offices including that of Ambassador to the United States

At the age of 71 years Lord Moynihan died at his house Carr Manor Leeds on 7th September 1936 one week after the death of Lady Moynihan An offer to be buried in Westminster Abbey was refused by his family



The General Infirmary at Leeds



MURPHY'S SIGN

MURPHY'S DRIP

MURPHY'S BUTTON

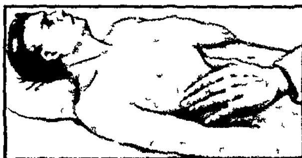
JOHN BENJAMIN MURPHY 1857-1916

John B Murphy was born on a farm near Appleton Wisconsin His parents were emigrants from Ireland He studied medicine at Rush Medical College Chicago and graduated M D in 1879 After holding an internship at Cook County Hospital he spent two years in post graduate study in Vienna under Billroth Returning to Chicago he was appointed lecturer in surgery at Rush Medical College subsequently becoming professor He was also at one time professor of surgery in the Northwestern University Medical School and attending surgeon at Cook county Hospital In 1895 he became chief of the surgical staff of the Mercy Hospital which position he held until his death The Mercy Hospital was the scene of his greatest triumphs

Murphy advanced surgical knowledge of almost every region of the body he was one of the first to investigate the cause and treatment of peritonitis following appendicitis He devoted much attention to the surgery of the lung and is rightly regarded as one of the pioneers of thoracic surgery Independently of Forlanini the Italian he suggested artificial pneumothorax and he was the first surgeon in America to carry out this procedure

In 1897 Murphy introduced end to end suture of blood vessels and performed the first successful suture of a divided femoral artery Towards the end of his life Murphy devoted himself largely to the surgery of bones and joints He advocated

John B Murphy was christened plain John Murphy but when he went to school he noticed that the majority of the other boys had at least two initials and so determined not to be inferior he added the B



Murphy's sign

bone grafting in cases of ununited fracture and he inserted a living graft of fascia between the bone ends of excised joints to restore movement after ankylosis Murphy s work on the surgery of the nervous system helped to lay the foundation of extensive developments in this direction

His name lives for some of his relatively minor achievements

Murphy's sign of the presence of cholecystitis is a standard method of physical examination when this condition is suspected

If continuous gentle pressure is exerted over the right hypochondrium while the patient takes a deep breath there is a catch in the breath just before the zenith of the inspiration i e as the edge of the liver descends below the costal margin and the fundus of the tender gal bladder becomes subjected to pressure

Murphy s Drip Murphy initiated the continuous method of giving saline solution per rectum (proctoclysis)

Actually there was no drip in Murphy's apparatus Murphy emphasised that the height of the reservoir should not be more than one foot above the rectum that the delivery tube should be of comparatively wide calibre and that his glass bulb with many perforations should always be employed Murphy's apparatus is not intercepted by any form of dipper Consequently flatus can be expelled through the wide calibre tube into the reservoir

Murphy s kidney punch is a much used clinical sign for eliciting tenderness of a kidney not otherwise apparent because of the deep well protected situation of the kidneys

Murphy s Button That ingenious device for effecting intestinal anastomosis after a short lived world wide trial was relegated to the museum Nevertheless it was this invention which demonstrated that intestine could be successfully anastomosed after resection thus paving the way to modern surgical achievement in this direction



Murphy's Kidney Punch



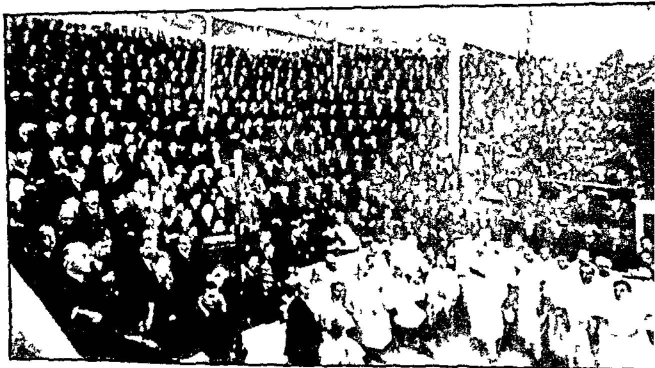
Murphy's Button

Perhaps the greatest of Murphy's triumphs was his success as a clinical teacher In spite of his high shrill voice his eloquence and force of personality held his audience spell bound A glance at the accompanying photograph which portrays a typical demonstration at the Murphy Clinic in 1913 will leave the reader in no doubt as to his immense following

Murphy was a tall and powerfully built man with a florid complexion a short red beard parted carefully in the middle and a red moustache His rise was meteoric he overcame the handicaps of early impecuniosity (his widowed mother was without means) bouts of ill health (he came from stock riddled with tuberculosis) and what was probably for him the most difficult the hurdles of unbridled jealousy erected by his professional brethren He rose as was inevitable—enthusiasm energy and signal ability such as his could not be suppressed Nevertheless it is unlikely that he would have reached the glittering heights he attained without especial favours His charming and accomplished wife not only entered into and helped him in every aspect of his professional life but she exercised a brake upon his highly geared mechanism which at times was inclined to race

Murphy practised in a city that was developing so rapidly as to take a place among the largest in the world He lived in an era of peace and plenty and at a time when by reason of radiology bacteriology and biochemistry diagnosis was becoming more and more accurate above all he embarked upon his career in the Golden Age of surgery when by reason of asepsis and better anaesthesia regions of the body hitherto considered closed forever to the surgeon were being exposed to the light of day

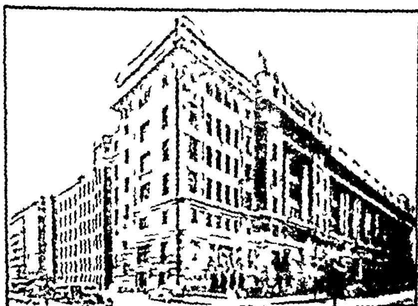
Murphy had several minor attacks of coronary thrombosis and at the age of 59 years he succumbed to a major attack of this disease which is so prevalent among



John B Murphy's Clinic at the Mercy Hospital

those professional men who work at high pressure

In addition to being a man with superabundant energy John B Murphy was activated by very high ideals which can be summarised in his own words The



The Cook County Hospital Chicago The largest general hospital in the world
It contains 3 400 beds In the early '90s J B Murphy was on the surgical staff

patient is the centre of the medical universe around which all our works revolve and towards which all our efforts tends



PAGET'S DISEASE OF NIPPLE

PAGET'S DISEASE OF BONE

SIR JAMES PAGET
1814 1899

Sir James Paget was one of the Great Victorians Eminent as a physiologist pathologist surgeon and teacher his nobility of character and his incessant application to duty made him a leader of the profession in that age of great men

James Paget was born at Yarmouth the youngest of the nine surviving children of the 17 born to Samuel and Sarah Paget His father was a brewer and ship- owner James attended a private school in Yarmouth and at the age of 16 was apprenticed to a surgeon on the staff of the local hospital During his apprenticeship Paget with an elder brother as co-author wrote a book on the natural history of Great Yarmouth At the age of 20 Paget enrolled as a medical student at St Bartholomew s Hospital London and in the following year while dissecting he observed tiny gritty areas in the muscles of a subject Paget examined these under a microscope and made original sketches of the parasite that was revealed these sketches are preserved in the library of the Royal College of Surgeons The preparations were examined by Richard (later Sir Richard) Owen* who named the worm *Trichina spiralis* and took the credit for the discovery

James Paget s father as a consequence of financial reverses was unable to pay the necessary dressing fee to the surgeons of the hospital As a result Paget never became a surgical dresser but had to be satisfied with acting as a clinical clerk to the physicians who required no such fee Nevertheless at the age of 22 he passed to examination for the M R C S (Eng)

Sir Richard Owen 1804 1892 K C B F R C S (Eng) F R S Hunterian Professor of Comparative Anatomy at the Royal College of Surgeons and later Keeper of the National History Collection of the British Museum



Paget s Disease of Bone

It was vital for Paget to earn his own living directly he qualified and this he did by teaching and acting as sub editor of the *London Medical Gazette*

In 1837 Paget was appointed Curator of the Museum at St Bartholomew s Hospital and a little later Demonstrator of Morbid Anatomy as well At the age of 27 he was elected Warden of the College of Resident Students then newly opened in connection with St Bartholomew s Hospital This post he retained for eight years During this time he made a complete descriptive index of all the anatomical and pathological specimens in the museum of the hospital

In 1847 a vacancy occurred for the post of assistant surgeon to the hospital for which of course Paget applied The fact that he had neither acted as a surgical dresser nor as a house surgeon was moved by the opposition as a factor to bar his candidature this however was over ruled and he came out top of the poll



Paget s Disease of Nipple

Paget was an indefatigable worker who proved himself to be an exceptional clinical observer He was an admirable teacher an eloquent lecturer and a sound but not a brilliant operator

He is now chiefly remembered by reason of his original description of Paget s

disease of bone (osteitis deformans) as Paget s disease of the nipple In an article in the St. Bartholomew's Reports for 1874 he described 15 cases of disease of the nipple all of which were followed by cancer in the substance of the underlying mammary gland Two years later he read a paper before the Royal Medico-Chirurgical Society On a form of chronic inflammation of the bones and in 1882 described seven further cases before the same Society

The thickening and bowing of the long bones of the legs the enlargement of the skull requiring progressively larger hats the slowly developing curvature and rigidity of the spine were accurately described together with the post mortem appearances In one patient cancerous change had taken place in the left radius and in the skull vault

Amidst an extraordinary busy life (for in addition to his hospital work he was building up what was to be the largest surgical practice in London) he found time to index minutely all the specimens of the Hunterian collection of the Royal College of Surgeons in the same way as he had catalogued the specimens in his own hospital This task took him seven years Yet he never appeared unduly hurried nor was he ever unpunctual in keeping appointments Of his assistants he expected the same determination of purpose and achievement to one of his subordinates who complained that he had no time Paget retorted tersely Sir you have all the time there is

In person Paget was slight a little above medium height his face rather long, his cheeks somewhat flushed and his eyes bright His voice was soft and he spoke fluently Although his public utterances were delivered with an air of spontaneity they were most carefully prepared before hand As an orator he had few equals and no less an authority than Mr Gladstone once said that he divided people into two classes—those who had and those who had not heard James Paget His lectures to students were prepared with the same care as his formal speeches while his writing are among the classics of medical literature Having climbed to the highest rung of the surgical ladder in London honours were showered upon him He was elected F R S (1851) and appointed Surgeon Extraordinary to Queen Victoria (1858) On resigning from the active staff of St Bartholomew's in 1871 he was created a baronet In 1875 he was President of the College of Surgeons and in the next

William Ewart Gladstone 1809 1898 The great Liberal Statesman, who was Prime Minister of England three times
John Abernethy 1764 1831 Surgeon St Bartholomew s Hospital

year became Sergeant Sergeant to the Queen

Sir James Paget always worked at the highest pressure to within an inch of his life as he once said When he gave up operating at the age of 64 he continued in consulting practice and was incessantly active in public duties and at medical societies When 77 he travelled to Rome to see a patient and in his eightieth year gave an address before the Abernethian Society formed in Abernethy's day composed of students graduates and teachers of St Bartholomew's Hospital for the purpose of scientific discussion is still in existence

When over 70 years of age he decided to make use of his vast collection of case records and after eight years work produced in 1891 his *Studies of Old Case Books*

He died in his eighty fifth year and was buried in Finchley Cemetery after a funeral service at Westminster Abbey

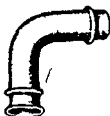


PAUL'S TUBE

PAUL-MIKULICZ OPERATION

FRANK THOMAS PAUL 1851-1941

Paul s tube may be employed as a temporary measure to drain away the faecal matter after a colostomy has been performed usually for obstruction of the large bowel It will be noticed that in the original illustration of Paul s tube (which is taken from the *Liverpool Medico-Chirurgical Journal of 1892*) that the glass tube has at one end *two* bevels It is this end which is inserted into the bowel and the other is connected with the rubber tubing Around the bevel nearer the angle of the twin bevelled end is tied a pursestring suture which has been inserted into the coats of the bowel before the opening into the intestine is made Between the first and second bevels is tied a piece of tape which makes a water tight junction between the bowel and the tube



Paul s Tube

Frank Thomas Paul was born at Pentney Norfolk He received his medical education at Guys Hospital qualifying 1871 He obtained his M R C S L R C P in 1873 In 1878 he became a Fellow of the Royal College of Surgeons of England In 1875 he was appointed the first resident medical office of the Liverpool Royal Infirmary At this time he describes his hospital work thus Erysipelas septicaemia payemia and hospital and gas gangrene breast died of sepsis Most of the surgeons of that time operated in dirty frock coat Paul subsequently was elected surgeons to the Stanley

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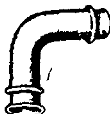


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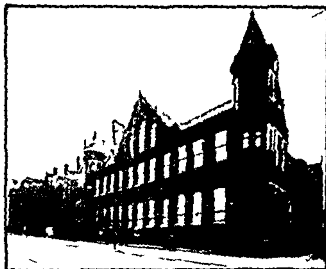
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Hospital and the Southern Hospital Eventually he was appointed surgeon to the Royal Infirmary Liverpool where he spent the last 20 years of his hospital career



The Royal Infirmary Liverpool

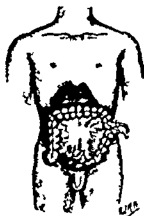
In contrast to his early experience he says It was a very wonderful twenty years in which the safety of operations increased astoundingly In my last years I did over a thousand consecutive breast cases without a death and in appendix cases with the exclusion of five hopeless cases already suffering from general peritonists also one thousand consecutive recoveries It is little wonder that Paul acquired a great reputation in Liverpool

Much of Paul s spare time was devoted to microscopical study He was an expert at staining and interpreting pathological tissues

Paul s operation of extra abdominal resection of a segment of colon for carcinoma of the colon is well known throughout the world it is frequently referred to as the Paul Mikulicz operation but this is hardly justifiable seeing that Paul anticipated Mikulicz in publishing this technique by no less than 10 years From an illustration taken from the *Liverpool Medico- Chirurgical Journal* of 1903 the principles of the operation that Paul devised can be seen The obstructing carcinoma is mobilised brought outside the abdominal cavity and resected the divided ends being brought out as a double barrelled colostomy In Paul s original operation his tubes were in serted into the proximal and distal stomas At a later stage the colostomy is closed

For many years after he had retired from the Royal Infirmary Paul was in active

Extra-abdominal resection of a colonic tumour using Paul's tubes



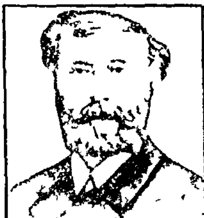
practice being consulting surgeon to the Royal Infirmary and on the staff of Hoy lake Cottage Hospital In 1925 on the occasion of his seventy- fifth birthday he was presented by the surgeons of Liverpool with a volume of papers selected from his most important contributions to surgical and pathological literature At the same time a bronze cast of his hand was presented to the Liverpool Medical Institution of which he had been a leading member for over 50 year In the course of a speech which the late Frank Jeans made on this occasion he said Paul operating in the heyday of his manual efficiency always made me think that he did with his hands what Pavlova did with her feet



Bronze of Paul s right hand (Liverpool Medical Institution)

Paul retired to Grayshott near Hindhead where he grew orchids and took colours photographs Paul s long life of achievement came to an end when he was 90 years of age.

Johann von Mikulicz Radecki, 1850-1905 Professor of Surgery Breslau
Frank Jeans 1878-1933 Surgeon The Royal Infirmary Liverpool



POLITZER'S BAG

ADAM POLITZER 1835 1920

When Professor Adam Politzer of Venna died in 1920 at the age of 85 years he had long been regarded as the father of modern otology He had laboured at his speciality for more than half a century and it is probably true to say that no other aural specialist did so much original work or attained such a position of authority as did this little Viennese professor



Politzer s Bag

Politzer was born in Alberti Hungary and received his degree of Doctor of Medicine from the University of Vienna in 1859 Early in his career he became interested in diseases of the ear and he realised the opening there was for this speciality in Vienna He determined to equip himself thoroughly and so spent several years travelling over Europe studying acoustics and the anatomy physiology and pathology of the ear under the most famous masters of the time

Politzer returned to Vienna in 1861 and he so impressed the authorities with the results of his scientific journeys that a new Chair of Otology was created for him He had only four pupils in his first course but it was not long before aurists flocked to his clinic from all parts of the world He was a model teacher not only was his knowledge profound but he could inspire other with his untiring zeal for conscientious work As many Englishmen and Americans attended his classes most of his teaching was given in excellent English but Sir St Clair Thomson who visited

his clinic in 1893 heard him speak fluently in German French Hungarian Czech and Italian during one lesson



The Old University Building, Vienna used until 1884

There is no department of otology to which Professor Politzer did not make fundamental contributions In 1863 he described his method of inflating the middle ear for diagnostic or therapeutic purposes by means of a soft rubber bag and Politzer s bag serves to remind us of his discovery

His favourite field was the anatomy and pathological anatomy of the ear He was the first to obtain pictures of the tympanic membrane by illumination Politzer was a talented artist and he excelled in making models in plaster His evenings were spent with microscope and drawing pencils working away at his vast collection

In 1878 appeared the first edition of his *Manual of Diseases of the Ear* which is without exception that greatest text book on the subject Professor Politzer was the author of more than one hundred monographs and articles and his writings are a mine of information

Politzer was a neat and dapper little man with sparkling dark eyes and a musical voice His genial manner and courteous attitude won for him the esteem of all who visited his clinic

Sir St Clair Thomson, 1859 1943 Physician for Diseases of the Throat and Nose King s College Hospital, London



POTT'S FRACTURE
POTT'S DISEASE

POTT'S PUFFY TUMOUR

PERCIVAL
POTT
1714-1788

The house in Threadneedle Street London in which Percival Pott was born was pulled down in 1780 in order to accommodate an extension of the Bank of England His father was a scrivener (A drafter of documents particularly legal documents) and died when Percival was only three years old leaving his mother with very little money They were helped however by a wealthy relative who was in fact the Bishop of Rochester and when the boy was 15 years of age he was apprenticed for two hundred guineas to Edward Nourse then Assistant Surgeon to St. Bartholomew's Hospital

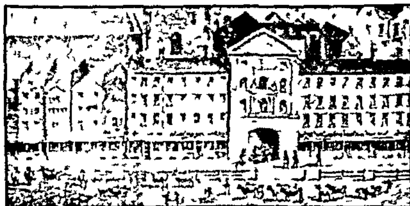


The Theatre of the Barber s Hall

Pott appears to have acquired a reputation early for before the end of his

apprenticeship he moved to a large house in Fenchurch Street and lived there with his mother and sister In 1736 he obtained the Grand Diploma of the Barber Surgeons Company, which corresponded in some respects to the Fellowship of the Royal College of Surgeons at the present time and was granted only after a searching examination It was customary for candidates for the Grand Diploma to call on the Examiners before the examination but Pott was prevented from doing so by a long confinement case In spite of this lapse he passed the examination which goes to show he was well known and held in esteem by the Company After the death of his mother he married and moved to Watling Street near St Paul s Cathedral

In 1744 he was appointed Assistant Surgeon to St. Bartholomew s Hospital and in 1749 full Surgeon During this time he acquired a great reputation as a teacher his forte being lecture demonstrations a form of teaching of which he is said to be the pioneer



A view of St Bartholomew's Hospital in 1740

In 1758 while riding in Kent Street Southwark now the Old Kent Road Pott was thrown from his horse and sustained a compound fracture of the tibia (not as popularly supposed a fracture dislocation of the ankle Pott s fracture-dislocation but a fracture of the shaft of the bone) The incident was described by his son in law thus Conscious of the dangers attendant of fractures of this nature and thoroughly aware how much they may be increased by rough treatment or improper position he would not suffer himself to be moved until he had made the necessary disposition

Edward Nourse 1701 1761 F R S Surgeon to St Bartholomew s Hospital, London

He sent to Westminster for two chairmen to bring their poles he patiently lay on the cold pavement it being the middle of January until they arrived In this situation he purchased a door to which he made them nail their poles When all was ready he caused himself to be laid on it and on it was carried home

The distinguished patient was examined by many of his fellow surgeons who consulted and concurred that the only course was amputation However while the instruments were being got ready Edward Nourse Pott s old teacher arrived, and on examining the limb decided that it might be possible to save it The other surgeons deferred to Nourse s opinion and Pott retained his leg In the due course the wound healed satisfactorily



Pott s Fracture Dislocation



Pott s disease of the spine with gross angular curvature

While he was confined to the house Pott took to writing and to commence with not unnaturally he chose the subject of fractures Later he wrote on many other subjects Two inflammatory conditions are named after him Pott s Puffy Tumour associated with osteomyelitis of a bone of the skull secondary to frontal sinusitis or to an extradural abscess and Pott s Diseases or spinal caries due to tuberculosis It was he who first described chimney sweep s cancer (carcinoma of the scrotum) Percival Pott s lectures became the most celebrated in London and served to disseminate his views and methods throughout Europe In 1764 at the age of 50 he was elected a Fellow of the Royal Society

In 1787 he retired from St Bartholomew s after having served the charity man and boy for half a century He died in 1788 from pneumonia and was buried in St Mary's Aldermary Church London where a tablet commemorating him could be seen until recent times



RAMSTEDT'S OPERATION

CONRAD RAMSTEDT 1867-1963

As a result of post mortem examinations on two infants who had died of this disease hypertrophic pyloric stenosis of infants was described by Harald Hirschsprung in 1888 There had been a few earlier descriptions commencing with Patrick Blair (*Philosophical Transactions* 1717) but it was Hirschsprung's paper that aroused world wide interest In spite of the high mortality of the condition physicians were reluctant if not vehemently opposed to advise operation for its relief From 1892 to 1912 reports of attempts to relieve the obstruction by various forms of pyloroplasty appeared from time to time nearly all ended fatally One notable exception was a patient operated upon by Lobker of Bochum who employed gastrojejunostomy In 1907 Fredet suggested a new operation in which the serous of muscular coats of the pylorus alone were cut Fredet s operation and that of Weber (1908) paved the way for Ramstedt s operation which was described in 1912

Visible peristalsis in an infant with hypertrophic pyloric stenosis



Ramstedt s two successful cases were reported at a Medical Congress held in Munster in 1912 and were published in the *Medizinische Klinik* of 20th October

1912 The report of the first cases reads as follows

When in September 1911 I was first confronted with an operation for pyloric stenosis I decided to perform the partial pyloroplasty according to Weber During the operation I noticed after section of the firmly contracted almost bloodless and hypertrophied muscular ring that the wound edges gaped markedly I had the impression that the stenosis was already overcome Nevertheless I sutured the incision transversely in order to complete the Weber pyloroplasty The tension of the wound edges was however very great and the sutures cut through so that the union of the wound edges in the opposite direction was incomplete I therefore covered the sutured area with a tag of omentum for protection

The child is cured Today about one year after the operation, he is developed as well as any child of his age



Incising the serous and muscular coats of the pylorus



The hyprtrophied muscle divided and the mucous membrane bulging into the incision

In the second case Ramstedt decided to leave the incision gaping it was a complete success The second infant operated on by Ramstedt was the son of a physician and it is remarkable that nearly all the patients on whom Ramstedt operated for this condition early in his large series were the children of medical men Since the introduction of the Ramstedt procedure the operative mortality has fallen from 50 per cent to practically zero

Conrad Ramstedt the son of a physician was born at Hamersleben a village in Central Prussia He attended the gymnasium at Magdeburg and studied medicine at Heidelberg Berlin and Halle graduating M D Halle in 1894 From 1895 to 1901

Harold Hirschsprung (see p 101)
Carl Lobker 1854 1912 Director Knappschaftskrankenhaus Bergmannsheil Bochum, Westphalia



The Raphael Clinic Munster This building was destroyed by bombing during World War II

he was an assistant in the surgical clinic at Halle and he then became a military surgeon He held high rank in the medical department of the German Army during the First World war and after his discharge in 1919 became chief surgeon to the Rafaelklinik at Munster Apart from five articles on the surgical treatment of pyloric stenosis his main contributions to medical literature are the chapters on the surgery of the male genito-urinary organs which he wrote for the *Handbuch der praktischen Chirurgie* edited by Bergmann Bruns and Mikulicz (1927)

With regard to the eponym Ramstedt s operation it should be noted that the name is spelled Rammstedt in the original report Professor Ramstedt changed his name from Rammstedt to Ramstedt and this accounts for the two versions In some textbooks on surgery it is spelt with one m in most two m One m is correct

Pierre Fredet 1870 1946 Surgeon Pitie and Charite Hospitals Paris
Wilhelm Weber 1872 1928 Surgeon, Dresden



VON RECKLING-HAUSEN'S DISEASE

VON RECKLING-HAUSEN'S DISEASE OF BONE

FRIEDRICH DANIEL VON RECKLINGHAUSEN 1833-1910

Friedrich Daniel von Recklinghausen one of Germany's most distinguished pathologists was born at Gutersloh Westphalia He obtained his M D degree at Berlin in 1855 and spent six years as assistant to the world famous pathologist Rudolf Virchow In 1865 von Recklinghausen was appointed professor of pathological anatomy at the University of Konigsberg In the following year he accepted the chair at Wurzburg and in 1872 he transferred to Strasbourg becoming professor of pathology in the newly founded university of that city

In 1882 von Recklinghausen described neurofibromatosis although Robert William Smith had written in 1849 a splendid monograph entitled *A Treatise on the Pathology Diagnosis and Treatment of Neuroma*

This is a condition of multiple tumours arising from the connective tissue sheaths of cutaneous nerves The cranial and spinal nerves may also be involved and there is often associated pigmentation of the skin producing the characteristic cafe au lait stains Occasionally plexiform neurofibromatosis may affect the fifth cranial nerve producing pendulous folds of skin the best known example of this was the Elephant Man whose skeleton can be seen in the Pathology Museum of the London Hospital

Von Recklinghausen also described the generalised decalcification of the skeleton associated with cyst formation (osteitis fibrosa cystica) The disease had been noted before but had not been studied systematically until Von Recklinghausen s

Rudolf Virchow 1821 1902 Director of the Pathological Institute of the Charite Hospital, Berlin He added 23 000 specimens to the museum of this hospital, and is rightly regarded as the Father of Morbid Anatomy

Robert William Smith, 1807 1873 Professor of Surgery University of Dublin

Generalised neurofibromatosis
von Recklinghausen s disease





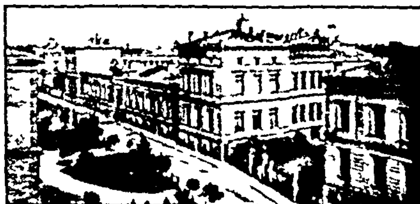
Parathyroid tumour exposed

accurate studied systematically until Von Recklinghausen s accurate description of three patients in 1891 In 1903 Askanazy found a parathyroid tumour in a patient with this condition and in 1925 Mandl was the first surgeon to remove a parathyroid tumour and to note healing of the bony lesion The condition is now known to be associated with the presence of a parathyroid functioning adenoma with an elevation of the serum calcium depression of the serum phosphorus and increased excretion of calcium and phosphorus in the urine Removal of the parathyroid adenoma is followed by gradual return of the skeleton to normality

As might be expected the attachment of von Recklinghausen s name to two completely different conditions has led to confusion On this account teachers

Max Askanazy 1865-1940 Pathologist Geneva
Felix Mandl 1892 1957 Surgeon, Vienna Removed a parathyroid tumour from a Viennese tram conductor with osteitis fibrosa cystica with remarkable improvement

of surgery have encouraged von recklinghausen s second clinical entity being designated descriptively viz osteitis fibrosa



The Anatomy and Pathology Institute University of Strasbourg

Von Recklinghausen left his mark on almost every field of pathology To quote but a few he first described fatty and hyaline degeneration of muscles invented silver impregnation for staining nervous tissue and first recognised basophilic mast cells in the blood Von Recklinghausen was a man of fine personal character and had a great reputation as a teacher He resigned from his professorship in 1906 and died at Strasbourg at the age of 77 years



REITER'S DISEASE

HANS REITER 1881-1969

Reiter's disease is characterised by non gonococcal purulent urethritis followed in two to fourteen days by arthritis and conjunctivitis The arthritis is very painful and is punctuated by remissions and exacerbations The knees the great toe joints and the interphalangeal joints are affected most often but other joints frequently are involved The conjunctivitis is severe and long lasting Complications such as iritis are not uncommon Intermittent pyrexia night sweats and secondary anaemia are the rule The disease is considered to be an example of a reactive arthritis where the joint inflammation is produced in response to charges induced by microorganisms at a site remote from the joint itself A familiar example of this is the association between rheumatic fever and the streptococcus Two organisms so far known to be involved in the disease are *Shigella* and *Yersinia enterocolitica* in the gut *Chalmydia trachomatis* in the genito urinary tract has also been implicated There is a strong genetic predisposition in that about three quarter of patients possess the antigen HLAB27 Treatment with steroidal anti inflammatory agents is effective although treatment of the microbial infection seems to have no effect on the progress of the disease

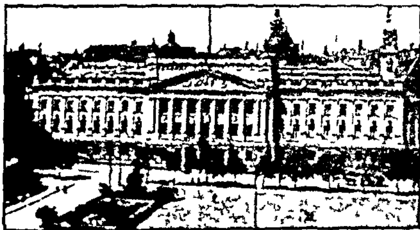
Hans Reiter was born in 1881 in Leipzig the son of a manufacturer and owner of a factory After Rieter had matriculated from the Thomas Gymnasium at the age of 20 he commenced his medical studies in the University of Leipzig and continued them in Breslau and Tubingen In 1906 he graduated M D Leipzig Reiter then undertook post graduate training in bacteriology and hygiene This prolonged study was exceptionally thorough and highly cosmopolitan It was calculated to embrace training under the greatest masters in bacteriology in all Europe and there are but



Bilateral knee involvement in Reiter's syndrome

few if any who have emulated Reiter in this respect Commencing with nine months at the Pasteur Institute Paris Reiter spent a year at the Institute of Hygiene and Pharmacology at Berlin University He then undertook two years training under Sir Almroth Wright at St Mary's Hospital London This was followed by two years as Assistant and Lecturer at the Institute of Hygiene Konigsberg In May 1914 Reiter was elected deputy Head of a special ward at the Institute for Hygiene Berlin August of that year found him an assistant doctor in the German army on the Western Front and in September while stationed at Chauny France he was called upon to care for a number of soldiers suffering from Weil s disease It was here that he made his first great discovery—he found the causative organism of Weil s disease the *Leptospira octerohaemorrhagiae* by inoculating innumerable animals This was a remarkable achievement seeing that the causative organism of Weil s disease had been sought unsuccessfully since 1880 Promoted to a higher rank Reiter was transferred to the Balkan Front In 1916 a patient was sent to him with severe inflammation of the conjunctivae the urethra and a number of joints Reiter published an account of this disease in the *Deutsche Medizinische Wochenschrift* in *1916* soon afterwards others reported similar cases and it was not long before the syndrome of abacterial urethritis conjunctivitis and arthritis became known universally as Reiter s disease

After World War I Hans Reiter became eminent in the field of preventive medicine He was successively Professor of Hygiene at Rostock University (1919 1923) Chief of a department of the Hygiene Institute in that city (1923 1925) Chief of a department in the Kaiser Wilhelm Institute of Experimental Therapy Berlin under Professor August von Wasserman Director of the Health Department of Mecklenburg and finally President of the health Service in Berlin and Honorary Professor Hygiene in the University of Berlin From October 1933 to 1945 he represented Germany at



The University of Leipzig

the International Health Organisation in Paris

One of the innovations Reiter made while occupying the Chair of Hygiene in Rostock was to make special trips with his students to various industrial centres in Germany where he lectured on social hygiene Professor Reiter was a Gold Medalist University of Leipzig (1957) a Robert Koch Medalist holder of the Grand Order of the Red Cross and an Honorary Member of many scientific associations at home and abroad In later years he made an intensive study of the illegitimate child and its problems

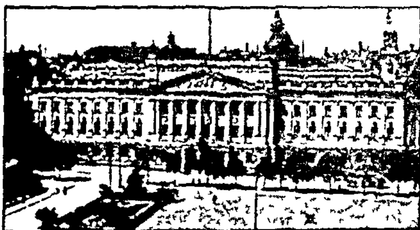
Sir Almroth Wright, 1861 1947 Professor Wright, 1861 1947 Professor of Bacteriology St Marys Hospital London
Adloph Weil, 1848 1916 Director of the medical Clinic Dorpat Estonia Developed laryngeal tuberculosis and subsequently practised at various spas



Bilateral knee involvement in Reiter's syndrome

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THE ARGYLL ROBERTSON PUPIL

DOUGLAS ARGYLL ROBERTSON 1837-1909

Douglas Argyll Robertson was born in Edinburgh the son of John Argyll Robertson M D *Douglas received his early education at Edinburgh and passed* on to the University there later he studied at Dundee where he graduated M D St Andrews in 1857 After a short period spent as house surgeon at the Edinburgh Royal Infirmary he went to Berlin to study ophthalmology under Albrecht van Graefe the leading ophthalmologist of the day



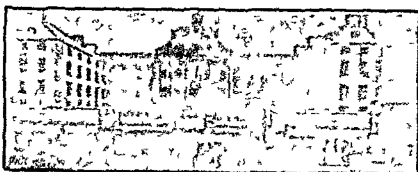
Argyll Robertson pupils They are small and do not react to light The patient has tabes dorsalis

On his return from Germany he became an assistant in the University of Edinburgh and conducted the first course of practical physiology ever held there During this period he proved that eserine derived from the calabar been led to constriction of the pupil a discovery which has proved a great benefit to suffers from glaucoma In 1868 at the age of 30 he became assistant ophthalmic surgeon to the Royal Infirmary

Douglas s father although a general surgeon had taken special interest in diseases of the eye and was one of the founders of the Edinburgh Eye Dispensary It is therefore more than likely that he suggested and encouraged his son to specialise entirely in ophthalmology and young Argyll Robertson was the first surgeon in

John Argyll Robertson 1801 1857 Surgeon Edinburgh Royal Infirmary
Albrecht von Graefe 1828 1870 Professor of Ophthalmology Berlin Founder of modern ophthalmic surgery and well known for his sign of exophthalmos

Scotland to devote himself exclusively to the practice of opthalmic surgery In this speciality he achieved great eminence and one of his discoveries that of the Argyll Robertson pupil (1869) has perpetuated his name He showed by a number of clinical observations that this peculiar phenomenon connected with the pupil was associated with tabes dorsalis and it is today regarded as practically conclusive evidence of syphilis of the nervous system The site of the lesion is probably between the oculomotor (III) nucleus and the lateral geniculate body



The old Royal Infirmary Edinburgh Foundation stone laid 1738 Opened 1741 Demolished 1879

Argyll Robertson became full ophthalmic surgeon to the Edinburgh Royal Infirmary in 1870 In 1886 he was elected President of the Royal College of Surgeons of Edinburgh and he was the first President (1893 95) of the Ophthalmological Society to be chosen from amongst those practising outside London He was surgeon oculist in Scotland to Queen Victoria and later to King Edward VII As an operator he was brilliant and resourceful and he introduced several new technical procedures he had married in 1882 but had no family and he and Mrs Robertson undertook the care and education of Prince and Princess Taraba son and daughter of an Indian potentate who had been one of Robertson s pupils In 1904 Argyll Robertson retired from practice and made his home in Jersey

In his later years Argyll Robertson travelled widely and it was during a third visit to India that he died at Gondal on 3rd January 1909 He was cremated on the banks of the River Gondhi Argyll Robertson was a man of splendid physique and dignified bearing with a fine intellectual head Golf he considered the finest

recreation in the world and to it he attributed much of his good health He was one of the leading amateur player of his day and five times won the gold medal of the Royal and Ancient Club St Andrews Scotland



ROENTGEN RAYS (SYN X-RAYS)

WILHELM CONRAD ROENTGEN 1845 1923

On the night of 8th November 1895 Professor Roentgen was investigating the phenomena accompanying the passage of an electric current through a vacuum tube The laboratory was in darkness and the tube with which he was working was covered by black cardboard which made it impervious to any light known To his astonishment Roentgen noticed that when the discharge was passed through the tube some crystals which lay upon a table some distance away became brilliantly illuminated He placed some of the crystals at a greater distance from the tube yet still the mysterious flourescence could be demonstrated He then placed materials of increasing density between the tube and the crystals First he used a book then wood and then plates of various metals All proved transparent to the rays in different degrees Finally he placed his own hand in the path of the rays and saw that the bones within it were outlined clearly From this it was but a short step to substitute a photographic plate for the fluorescent screen—and the science of radiography was born

Roentgen reported his discovery to the Medical Society of Wurzburg and the rays he christened X rays

Wilhelm Conrad Roentgen was born in the Rhineland town of Lennep His mother was Dutch and his father German and they were cousins and came from a family of well known merchants When Wilhelm was three years old the Roentgens moved to Apeldoorn Holland and when the boy reached school age he was sent to Utrecht where at the age of 16 he enrolled at the technical college From Utrecht he passed on to the University of Zurich where he obtained the Ph D with a thesis on *The Study of Gases* About this time the lecturer on physics under whom Roentgen studied



SIMS' SPECULUM

SIMS' POSITION

JAMES MARION SIMS 1813 1883

In 1845 James Marion Sims a surgeon practitioner of Mount Meigs Alabama was called to attend a women who had fallen from a horse and suffered a retroflexion of the uterus In making a digital examination by the vaginal route with the patient on her knees, suddenly the displacement rectified itself and the patient was relieved of her symptoms When she turned on to her back Sims noticed a considerable expulsion of air from the vagina He surmised that the knee chest position by favouring the entry of air into the vagina aided the replacement of the uterus



Sims Speculum



Sims Position

Soon after this incident Sims devised his speculum (at first a bent spoon) to aid in the admittance of air Subsequently he discovered that the left lateral position was a effective of vaginal examination as the knee chest position

Sims was born in Lancaster South Carolina He graduated from Jefferson Medical College Philadelphia in 1835 and spent 18 years in general practice in



Statue of Marion Sims in Bryant Park opposite the New Yark Academy of Medicine

leaders Sims successes where other had failed led to calls for his professional services from all over Europe

When he at length returned to America Sims was the best known gynaecological surgeon in the world Among his later contributions to gynaecological surgery were his method of amputating the cervix uteri and an enquiry into the causes and treatment of vaginismus In 1856 he published his *Clinical Notes on Uterine Surgery* which was translated into German

Sims was said to be a kind hearted but impulsive man He died in his seventieth year

Auguste Nelaton 1807 1873 Surgeon Hospital St Louis Paris Among other accomplishments he invented the rubber catheter but it was left to James Archibald Jaques 1815 1867 the Works Manager at the rubber factory in England to perfect the patent the soft rubber catheter

Alfred Armand Louis Velpaeu 1795 1867 Surgeon the Charite Wrote a treatise on diseases of the breast the most important work on the subject it is time He is known also for Velpau s bandage for the treatment of fractured clavicle



STENSEN'S DUCT

NIELS STENSEN 1638 1686

Niels Stensen was born at Copenhagen the son of a court jeweller He studied medicine in his native city and later at Leyden in the Netherlands

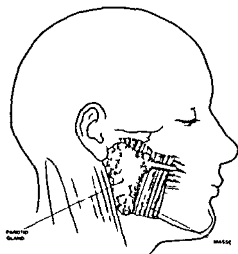
One morning in April 1661 while dissecting the head of a sheep in the house of his professor Stensen noticed that he could pass a probe down a channel from the parotid gland He passed the probe again and heard it click against the teeth Stensen had discovered the duct of the parotid gland

Soon afterwards he examined other glands such as the lacrimal and was able to prove that all secreting glands have ducts This great discovery was made when Stensen was only 22 years of age By the time he was 24 he had made other notable anatomical discoveries which he incorporated in a book

One of his chef interests at this time was the study of the brain and on one of his visits to Paris (1664) he gave a celebrated discourse on cerebral anatomy and criticised the fanciful views that were held at that time

After leaving the Netherlands he travelled widely in Germany France and Italy About six months after Stensen s arrival in Italy fishermen off Leghorn landed an enormous shark The head was transported to Florence and place at Stensen s disposal for examination The dissection gave him an opportunity to seek the solution as to whether shark s teeth were in fact a component of certain fossils From this study emerged a short treatise which is acclaimed to be the foundation of the science of palaeontology and geology

Stensen was an accomplished linguist and had a full command of eight languages in addition to his native Danish It is possible that this gift of tongues was partially responsible for his restless disposition that would not allow him to settle in his



Dissection showing Stensen s Duct

homeland or in any of the countries that he visited

Stensen s contributions to anatomy are so amazing as to be almost unbelievable He demonstrated Peyer s patches before Peyer he maintained that the human ovary produced ova he was the first to show that the mucous membrane of the nose palate and throat secreted mucus by virtue of small glands in its deeper layers Perhaps one of his greatest discoveries was the mechanisms of lacrimation until Stensen s time learned men thought that the tears were formed in the brain and were led through the nerves to the eyes Stensen blasted this theory by a perfect description of the whole lacrimal apparatus in 1662 At the age of 33 he published the first case of Fallot s tetralogy a form of congenital heart disease so named after Louis Arthur Fallot redescribed it in 1888 Stensen s contributions to physiology are not insignificant For instance he showed that the muscle fibre is the contractile element whereas previously it was considered that the tendon was the primary instrument of the movement

In 1667 *Stensen met a pious and learned lady* who was *instrumental in* converting him from Lutheranism to Roman Catholicism

A convert a such fame was received warmly by the Church It was not long before he applied himself to religion with that diligence and self denial which characterised his every undertaking In 1672 he returned to Copenhagen but within two years we

Johann Peyer 1653 1712 Professor of Medicine Schaffhausen Switzerland
Etienne Louis Arthur Fallot 1850 1911 Professor of Medicine Marseilles



The University of Copenhagen in the seventeenth century The central building is the anatomical theatre The Church of Our Lady is seen in the background

find him back again in Florence

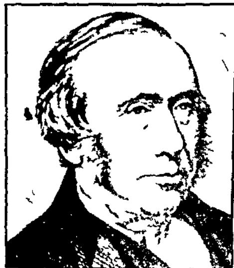
At the age of 36 he took holy orders The following years he was made a bishop and was sent as Vicar Apostolic to the northern countries of Europe Thereafter for nine years he lived in Germany It was not unusual for him to preach in three languages on the same day He worked from morning to night in the service of the Church and for the welfare of the poor

It is said that his life of self denial undermined his health He died at the early age of 48 By command of the Duke of Tuscany his body was taken to Florence and buried with public honours

So passed a man possessed of one of the most agile brains of the seventeenth century

On the wall of the San Lorenzo Church in Florence near his tomb is a plaque set up in the year 1888 by the world s geologists who reverence his name Beneath it is the following inscription which commences *Friend you behold the likeness of Nicolaus Steno To it more than a thousand men of learning from all parts of the world contributed*

Martin Luther 1483 1546 Professor of Theology (orthodox Roman Catholic) at the University o[f] Wittenberg until 1517 when he was excommunicated for his unorthodox views He founded th[e] Lutheran Church



SYME'S AMPUTATION

JAMES SYME 1799-1870

James Syme was born in Princes Street Edinburgh in 1799 the second son of an Edinburgh lawyer or Writer to the Signet He was educated at the High School of Edinburgh and at the age of 16 he proceeded to Edinburgh University becoming a pupil of Dr Barclay He never attended a course of lectures on surgery While he was a student Syme was very interested in chemistry and he discovered that India rubber was soluble in naphtha and further that the rubber solution when applied rendered the cloth water proof Had Syme patented his discovery he might have made a fortune this was done later by Charles Macintosh of Glasgow whose name is still associated with waterproofed fabric

In 1820 while still a final year medical student he was appointed Superintendent of the local fever hospital In 1821 he became a Member of the Royal College of Surgeons of England The story of his association with his cousin Liston who was five years his senior in establishing an extramural school of anatomy and acting as Liston s assistant in private practice has been told already In 1824 after the breach between Liston and himself Syme paid a visit to the German medical schools and on his return he opened a private hospital known as Minto House This proved very successful and in addition to treating surgical patients Syme took apprentices and became a very popular clinical teacher—so popular in fact that his clinic rivalled the official school of medicine the Edinburgh Royal Infirmary It is therefore hardly surprising that when a vacancy occured at the Royal Infirmary in 1829 Syme failed

John Barclay 1758 1826 M D Edin F R C P Edin Lecture on Anatomy and Surgery University of Edinburgh
Charles Macintosh 1766 1843 F R S Chemist In addition to his work on waterproof fabrics he made important contributions to the chemistry of dyes and to the manufacturer of iron and steel

to obtain that envied position The first holder of the Chair of Regius Professor of Clinical Surgery James Russell had never been an inspiring teacher and a by the time he had passed his eightieth year delivered lectures that contemporaries described as somnolent At the age of 81 he offered to resign on condition that his successor paid him £ 300 a year for the remainder of his life Syme acquiesced and having gained the Chair the infuriated Governors were *ipso facto* compelled to allot the new Professor beds in the Royal Infirmary A few months later Liston left for London and Syme succeeded to the great part of the former s private practice thenceforth Syme s rise to fame was meteoric



Syme s knife

Syme was a dapper little man but his physique and small hands did not allow him to be so brilliant or rapid with the amputation knife as the emulate the *tour de maitre* of some of the pre Listerian masters Neither did he excel at lithotomy at which operation of a longer finger was of great advantage in removing the bladder stone through a perineal incision He was however a prince of clinicians a remarkably good lecturer a patient investigator and a careful operator well versed in the anatomy of the region he traversed

Syme s name is perpetuated by his amputation Before 1844 when Syme reported this operation the lowest level at which surgeons would amputate was about half way down the tibia In suitable cases Syme amputated through the ankle joint and with the Syme s knife keeping close to the bone he cut a flap from the superficial structures of the heel The bones were then sawn through just above the articular surface of the tibia Syme s amputation is a good amputation for severe trauma to the foot and many patients are able to get about without an artificial limb

When Liston died in 1847 Syme was elected to fill his place at University College Hospital London but not linking the atmosphere he resigned within a few months and returned to Edinburgh and took up his former appointment which had not been filled It was in 1853 when James Syme aged 54 was at the height of his fame and accredited by many to be the first surgeon in Europe that Joseph Lister arrived in Edinburgh and presented his credentials to Professor Syme Syme who was a man of strong likes and dislikes took an immediate liking to Lister and it was not



Symes Amputation It is essentially a disarticulation at the ankle joint

long before Syme made Lister of supernumerary clerk and later his house surgeon About this time Syme s private assistant died of cholera in the Crimea This created a vacancy on the Infirmary staff and Lister succeeded in his application for the post of Assistant Surgeon at the *Edinburgh Royal Infirmary Not long afterward Lister* married Syme s daughter

Syme was one of the first surgeons of this side of the Atlantic to adopt ether anaesthesia and in 1868 he was Lister s first convert to the antiseptic method

Syme was a genial happy man with an intense love for flowers His contemporaries said that he never wasted a word a drop of ink or a drop of blood

James Russell 1754 1836 Regius Professor of Clinical Surgery Edinburgh



THIERSCH SKIN GRAFT

KARL THICRSCH 1822-1895

Karl Thiersch was born in Munich After studying at Berlin Vienna and Paris he graduated in medicine at the university of his native city

In 1850 he took part in the war between Prussia and Denmark serving under the great orthopaedic surgeon Stromeyer whose teaching and example had much influence on him After the war had finished Thiersch was appointed Professor of Surgery at the University of Erlangen a post which he held for 13 years In 1857 he was transferred to the Chair of Surgery at Leipzig which he held for 28 years During the Franco Prussian war of 1870 he was made Consulting Surgeon to the 12th Army Corps



With the skin stretched to the fullest degree the graft is cut with a razor or special knife

George Friedrich Louis Stromeyer 1804 1876 Professor of Surgery Kiel has been called that Founder of Orthopaedic Surgery in that it was he who introduced the subcutaneous tenotomy

Professor Thiersch who had a considerable reputation as a practical surgeon was an early follower of the antiseptic method of Lister

Although Thiersch made comparatively few contribution to surgical literature his name lives as the inventor of the Thiersch graft which he described at a meeting of the German Surgical Society in 1874 A Thiersch graft comprises a thin sheet of skin consisting of the epidermis and superficial part of the dermis which is cut by means of a razor a special skin graft knife or a dermatome

The thigh is a particularly suitable donor area The defect reepithelialises from islands of epithelium left behind at the cut ends of hair follicles and sweat and sebaceous ducts These islands coalesce and the area heals completely within two or three weeks Indeed it can be harvested again if necessary for further grafting The Thiersch graft itself placed on a raw defect such as a granulating wound receives its nourishment first from diffusion of tissue fluid then after three or four days by the in growth of capillaries from the wound bed

Carl Thiersch died at Leipzig at the age of 73





THOMAS'S SPLINT

THOMAS'S WRENCH

HUGH OWEN THOMAS 1834-1891

The story of Hugh Owen Thomas is one of the most amazing in the history of medicine The son of a bone setter the whole of his professional life was spent in general practice in the slums of Liverpool yet he did more than anyone before him to advance the treatment of diseases of bones and joints

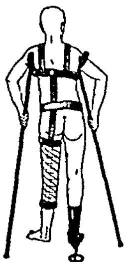
Thomas came from a family of bone setters of Anglesey whose secrets had been handed down from father to son for many generations His father Evan Thomas had migrated to Liverpool at the age of 19 and had acquired a great reputation there by the practice of his art He was determined that his son should receive the benefits of a regular medical education and Hugh was apprenticed for four years to his uncle Dr Owen Roberts of St Asaph North Wales Later he studied at Edinburgh and at University College London qualifying M R C S in 1857

After spending a few weeks in Paris where he much admired that skill of the French surgical instrument makers Thomas returned to Liverpool to help his father He found however that the rule of thumb method of the bone setter were uncongenial and in 1859 moved to a different part of the city and set up practice independently

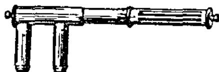
He soon gained a great reputation at first among the poor people and then among the better classes in Liverpool and its environs He held a clinic every Sunday morning at which he treated poor people gratitiously

The cardinal theme in Thomas s creed was the necessity for **Rest** enforced uninterrupted and prolonged and he carried this principle into effect in all his

Sir Robert Jones 1858 1933 Surgeon Royal Southern Hospital Liverpool







Thomass Hip Splint in use

Thomass Wrench

treatments Immobilisation in the treatment of fractures has been practised since the earliest times but in Thomass day excision and amputation were almost the routine methods adopted for chronic diseases of joints Thomas applied the principle of complete rest in these cases also and did much to revolutionise the treatment of tuberculosis joints He insisted that while rest was the first requisite it must be applied in such a way that the diseased part was neither compressed nor the normal circulation of the limb impaired With this end in view Thomas invented most of the fracture splints now in use These splints were made in his own workshop and he kept a blacksmith and a saddler employed constantly Thomas also invented a wrench for the reduction of fractures and an osteoclast to break deformed bones before resetting them The secret of his success was his mechanical genius and attention to detail The outstanding feature of his apparatus was its extreme simplicity The work of Thomas would never have attained recognition had it not been for his nephew and pupil Sir Robert Jones and the opportunities provided by the First World War Thanks to the more general use of the Thomas splint the mortality of compound fracture of the femur fell from 80 per cent in 1916 to 7 3 per cent in 1918

Thomas was a thin dark fragile little man He had an accident while a student which resulted in a deformed eyelid and rather spoiled the expression of his face He had indomitable energy and worked from six in the morning until midnight never taking a holiday He was always dressed in a black frock coat buttoned up



Hugh Owen Thomas's house at 11 Nelson Street Liverpool

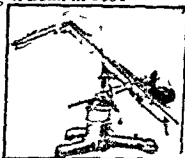
[illegible] a peaked naval cap tilted over his defective eyelid He smoked [illegible] continuously and was seldom seen without one in his mouth [illegible] time Thomas's work did not receive the recognition which was his [illegible] is acknowledged as a great pioneer in orthopaedic surgery and a [illegible] of mankind



TRENDELENBURG'S POSITION

FRIEDRICH TRENDELENBURG
1844 1924

Trendelenburg's position is used for many gynaecological and other intra pelvic operations Its inestimable value is that the intestines can be packed away from the field of operation leaving the pelvis free from coils The position was first described with the permission of his venerable chief by Willy Meyer who had been a student under Professor Trendelenburg at Bonn in 1881



Trendelinburg's position

Friedrich Trendelenburg was born in Berlin He had the unusual experience of pursuing his early medical studies in Glasgow and returning to Germany to complete his training he graduated M D Berlin in 1866 From 1868 to 1874 he was assistant to Professor Langenbeck after which he was appointed surgeon to the Friedrichshain Hospital Berlin A few years later he was called to the Chair of Surgery at Rostock from thence to Bonn and finally to Leipzig

Trendelenburg took a leading part in the great advance of surgery during the latter part of the nineteenth century He founded the German Society of Surgeons and was it president and historian Professor Trendelenburg wrote much and did exceptional work in the fields of plastic surgery congenital dislocation of the hip



The Surgical Institute Leipzig where Trendelenburg worked

joint and the surgery of blood vessels besides making an international reputation as a gynaecological surgeon Trendelenburg's name is associated with two clinical tests one for confirming shortening of a leg due to an ununited fracture of the neck of the femur or congenital dislocation of the hip joint and the other for detecting incompetence of the valve of the veins of the thigh The latter test known universally as Trendelenburg's test was described by Sir Benjamin Brodie many years before it was published by Trendelenburg

When he was 64 years of age Trendelenburg devised and carried out an operation for removal of the blood clot blocking the pulmonary artery in pulmonary embolism but he never met with success On his 80th birthday one of his pupils Kirschner demonstrated a patient upon whom he (Kirschner) had performed successfully pulmonary embolectomy

This great practical surgeon was keenly interested in the history of surgery and wrote a valuable work on ancient Indian surgery and a fascinating autobiology The closing years of his life were spent at Nikolassee Germany He died in his 81st year as a result of carcinoma of the lower jaw

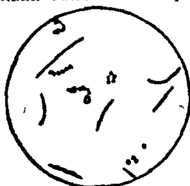
II Willy Meyer 1858 1952 Surgeon Lennox Hill Hospital, New York
Berhard von Longenbeck, 1810 1887 Professor of Surgery Berlin
Martin Kirschner 1879 1942 Professor of Surgery University of Heidelberg Germany



VINCENT'S ANGINA (STOMATITIS)

HYACINTHE VINCENT 1862-1950

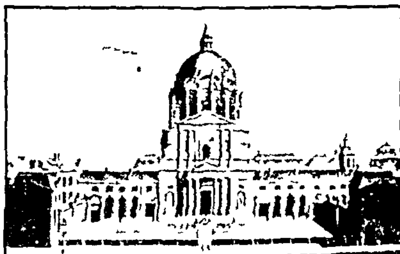
Hyacinthe Vincent established beyond reasonable doubt that exceptionally a pyogenic affection is due to symbiotic infection This means that the infection is due to two organisms living in harmony and having joined partnership neither is able to effect destruction of human tissue without the other The duel infection Vincent discovered now known as Vincent s angina (or stomatitis or infection) is due to the *Fusobacterium plauti vincenti* and a spirochaete subsequently called the *Borrelia vincenti*



Borrelia vincenti and F plautivincenti

Born in Bordeaux after a brilliant school career Hyacinthe Vincent studied medicine at first in his native city and then in Paris where in 1887 he graduated M D winning the prize for the best thesis Against the advice of his professor who recommended this brilliant student to pursue an academic career Vincent chose the Army Medical Service and in 1888 he presented himself for the examination for entry to the famous military medical college Val de Grace Once nore he gained first place On completing the usual course of military training he

was commissioned Medecin Aide Major second class and was assigned to the bacteriological laboratory of the college In 1891 Major Vincent was posted to the military hospital at Algiers where he served for five years and where the established the first army bacteriological laboratory



The Val de Grace Military Hospital and School Rue Saint-Jacques Paris V

In 1894 Vincent discovered the organism responsible for Madura foot the *Oospora madurae* In 1896 he made the discovery that perpetuates his name in the following way Forty seven wounded African soldiers were admitted to the hospital in Algiers From their suppurating wounds Vincent isolated the symbiotic organisms referred to above In later years he extended this study and found these organisms were the ca e of the ulcero membranous stomatitis known during the 1914 18 was a trench mouth Towards the end of 1896 Vincent was transferred to Marseilles where as in Algiers he established a bacteriological laboratory A year later at the age of 35 he was *nominated Professor agrege in Forensic Medicine* at Val de Grace In 1901 Vincent was called to the Chair of Bacteriology and Epidemiology at Val de Grace and it was here that he founded a laboratory for the making of anti typhoid vaccine This vaccine was tried among the troops in North Africa and was found to be effective

During the first winter of World War I typhoid raged among the French troops in the trenches and there was a mortality of more than 25 per cent Vincent sought

Marshal Ferdinand Foch. O M 1851 1929 Chief of the Allied Armies in France 1917 1918



an interview with the President of the Council of Ministers, and convinced him of the imperative necessity for vigorous action. The next day Vincent was given special powers, and, proceeding to the Western Front, he supervised the anti-typhoid vaccination of the troops. Not long afterwards Marshal Foch said of Vincent that he had won a medical battle of the Marne.

Vincent was promoted Medecin General in 1917 and on him were bestowed the most prized honour in the gift of the French Republic; amongst others he was awarded the Grand Croix de la Legion d'Honneur. In 1950, when he was on his deathbed, he was invested with the Medaille Militaire. This honour, which is hardly if ever given except to combatant soldier, was especially voted by the Council of Ministers in recognition of his services to the army and the humanity.

The attainment of the highest rung often prevents the holder from pursuing research, but not so Vincent. The list of his advancements of medical knowledge is formidable. It includes cerebro-spinal fever, Malta fever, cholera, tetanus and meningitis.

In 1924 he was retired from the army under the age limit, but in the following year he was appointed Professor of the College de France, the chair being created especially for him. At the same time he continued to work in a small laboratory at Val-de-Grace, and published papers on varying subjects until shortly before his death, which occured at the age of 87 years. So passed the greatest bacteriologist the army of France had ever known.



VOLKMANN'S ISCHAEMIC CONTRACTURE

VOLKMANN'S MEMBRANE

VOLKMANN'S SPOON

RICHARD VON VOLKMANN
1830 1889

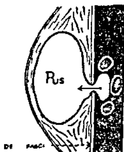
The whole of Richard von Volkmann s professional life was spent at Halle in Saxony where his father had held the chair of anatomy and physiology Richard studied at several universities and graduated M D Berlin and at the age of 24 Two year later he was appointed to act as deputy professor of the Surgical Clinic at Halle and in 1867 he became the professor When Volkmann took over from his predecessor hospital gangrene was so rife in Halle that it was said that no one dared to touch a knife in the surgical clinic



The University Clinic Halle in the time of Richard von Volkmann

On assuming full control of the clinic Volkmann who had studied everything that Lister had written established *in toto* the antiseptic method in the hospital He became Lister s most powerful advocate in Germany Sir George Making who visited Volkmann s clinic at Halle in 1879 has left a vivid description of Volkmann s

methods The most striking feature of his operating theatre was the terazza paving so arranged as to allow efficient drainage This was a very important matter because in addition to the Lister spray irrigating the wounds freely with 1 in 20 carbolic lotion was always employed during operations The surgeons and assistants all wore long rubber boots and as soon as Volkmann called watering can this lotion was poured out with great freedom from gardeners watering cans with long spouts The slogan of the clinic was If dirt be unavoidable it must be antiseptic dirt



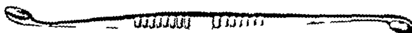
Collar stud abscess of the neck

Volkmann made many contributions to surgery and was an elegant bold and original operator surgeons from all over the Continent flocked to his clinic It was he who first drew attention to that fact that carcinoma of the skin can result from constant exposure to irritating substances and to this end he published an important study of cancer in paraffin workers It was Volkmann who described the peculiar velvety very dark red granulation tissue that lines of tuberculosis abscess particularly the superficial loculus of a collar stud abscess of the neck This granulation tissue known as Volkmann s membrane is so luxuriant that it hides the tiny opening in the deep cervical fascial through which the tuberculosis pus escapes from the infected breaking down lymph nodes lying beneath the deep fascia For removing this and other types of exuberant granulation tissue e g that occuring in connection with necrosis of bone Volkmann designed his spoon which is still in daily use

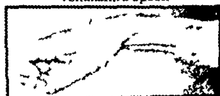
However Volkmann s name is perpetuated by his ischaemic contraction (which goes by no other name) more than by any other of his contributions to knowledge

He first described ischaemic contracture in 1872 subsequently reporting further

Lord Lister 1827 1912 Professor of Surgery successively at Glasgow Edinburgh and London
Sir George Makins 1853 1933 Surgeon St Thomas's Hospital London



Volkmann s spoon



Volkmann s ischaemic contracture

cases Usually ischaemic contracture occurs in the bellies of the flexor muscles of the forearm but it is seen occasionally in a leg It is a rapidly progressive destruction and contracture of the muscles concerned Until 1872 this phenomenon was considered to be due to nerve injury Volkmann showed that it was due to death of muscle fibres the result of the arterial supply being jeoparadised by too tight splinting He demonstrated that the involved muscles underwent necrosis their subsequent replacement by fibrous scar tissue producing the typical contracture While the condition almost always follows a fracture Volkmann insisted that it could result from injury to soft parts alone—a contention that has now been fully substantiated Many cases have resulted from a too-tight plaster cast and many legal actions for malpractice have been fought on account of the development of this contracture

Volkmann was a striking personality of medium height fairly stout build and with long Dundreary whiskers A man of intellect and culture he wrote delightful poems under the pen name of Richard Leander His *Dreams by French Firesides* containing fairy tales written while on service during the Franco Prussian war made a great impression in Germany and passed through no fewer than 14 editions

He died at Jena at the comparatively early age of 59 years



THE WASSERMANN REACTION

AUGUST VON WASSERMANN 1866 1925

The names of many members of the medical profession have been perpetuated because they have discovered a disease sign or test In the case of August von Wassermann not only has his name become part of the medical vocabulary of the countries but the term Wassermann Reaction has been abbreviated to the first letter of each word viz W R and these letters alone remind us of his great achievement No sign in what may be termed medical shorthand is so well known or carries such ominous significance as W R +

The Wassermann Reaction for the sero-diagnosis of syphilis was discovered by Wassermann and his associates Neisser and Bruck in 1906 It followed almost immediately upon two discoveries of fundamental importance the demonstration by Metchnikoff and Roux in 1903 that syphilis could be inoculated in apes and the discovery in 1905 by Schaudinn and Hoffmann of the organism of the disease the *Treponema pallidum*

Wassermann s discovery was based on a mass of work by earlier bacteriologists and especially on the researches of the Belgians Bordet and Gengou into the phenomenon of complement fixation

Stated in its simplest form the principle of complement fixation depends on

Albert Ludwig Siegmung Neisser 1855 1916 Professor of Skin and Veneral Disease Breslau He recognised the gonococcus in 1879
Carl Bruck 1879 1944 Physician University Clinic for Skin Disease Breslau
Elie Metchnikoff 1845 1916 Professor of Biology odessa Latter became sub director of the Pasteur Institute Paris
Emile Roux 1853 1933 Director of the pasteur Institute Paris
Fritz Schaudinn 1871 1906 Director of protozoology The Kaiser Wilhelm Institute Berlin
Jules Bordet 1870 1961 Honarary Professor University of Burssels Formerly Director of the Pasture Institute Brussels
Erich Hoffmann 1868 1959 Professor and Director University Polyclinic for Skin Diseases Bonn From 1910 to 1934
Octave Gengou 1875 1957 Bacteriologist Institute of Hygiene University of Brussels

the fact that foreign organic substances such as pathogenic bacteria stimulate the formation in the blood of antibodies designed to destroy the invading organisms Bordet and Gengou devised tests for the detection of these antibodies in the blood serum and Wassermann succeeded in applying similar methods to the detection of antibodies in the serum of symphilitic monkeys The test was soon developed as a practical one for the diagnosis of symphilis in man and it also proved to be of great value in estimating the activity of the disease process

The mechanisms of the Wassermann reaction depends on the detection of a cross-teaching antibody to Cardioliphin in beef heart muscle The test itself is over sensitive with a proportion of false positive reactions It has now been replaced by tests which nevertheless retain the underlying principle of the original W R test particularly the demonstration of Fluorescent Treponemal Antibody (F T A)



The Kaiser Wilhelm Institute Berlin

August von Wassermann was born in Bamberg Bavaria He was pupil of Robert Koch and was associated with the Koch Institute for Infectious Diseases throughout his career In 1907 he was placed in charge of the Department of Therapeutics and Serum Research of the University of Berlin and in 1913 became Director of the Kaiser Wilhelm Institute for Experimental Thera ces Early in his career Wassermann studied the antitoxin treatment of diphth h id important work in connection with inoculation against typho

His later years were occupied with research on tuberculosis and on the possibilities of sero-diagnosis in cancer

August von Wassermann died in Berlin at the age of 59 years

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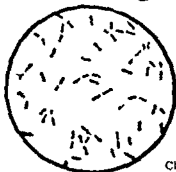
August von Wassermann died in Berlin at the age of 59 years



CL WELCHII

WILLIAM HENRY WELCH 1850 1934

Clostridium welchii (or perfringens) is the organism most commonly associated with gas gangrene It is an anaerobic capsulated sporeforming gas producing and gram positive organism Dr Welch discovered and described the bacillus in 1892 when he was Professor of Pathology at the Johns Hopkins University Baltimore



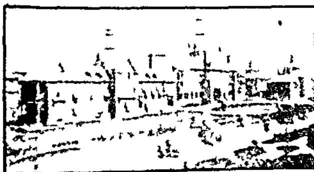
Cl welechii

William Welch who came from a long line of members of the medical profession (his father grandfather and great grandfather were all doctors) was born at Norfolk Connecticut After attending Yale University New Haven Connecticut in 1872 Welch enrolled at the College of Physicians and Surgeons New York and there graduated in 1875 Soon after qualifying he proceeded to Europe to study under men who were creating the new science of bacteriology The 70s and 80s of the last century were a golden age in medical discovery few men can have had such opportunities as were given to this eager young American who went everywhere and saw everybody whose name loomed large in the vernal firmament of bacteriology

On his return to New York in 1879 he was made Professor of Pathology at Bellevue Medical College and held his chair until 1884 when he was appointed the first

Professor of Pathology at the university which had just been founded under the will of the Baltimore millionaire Johns Hopkins

Professor Welch himself did notable work as a pathologist and bacteriologist and his literary output of more than 300 papers covered an amazing range of subjects

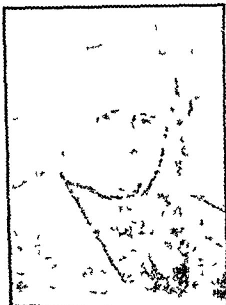


The Johns Hopkins University Baltimore 1899

Professor Welch had always taken a leading part in preventive medicine and in 1916 he resigned the chair of pathology at Johns Hopkins University to become Director of the School of Hygiene and Public Health at Baltimore At the age of 76 this remarkable man accepted a newly created post of Professor of the History of Medicine in the Johns Hopkins University and at once set out to travel over Europe in order to purchase old medical books In 1930 the fine library which he had created was dedicated and named in his honour the William H Welch Medical Library

Professor Welch was a short thick set little figure with twinkling blue eyes a white moustache and Vandyke beard A humble genial little man he remained a bachelor

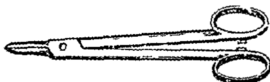
Professor Welch died in Baltimore at the age of 84 He was respected as a scientist admired as an organiser for the betterment of public health and beloved as a teacher



SPENCER WELLS' FORCEPS

SIR THOMAS SPENCER WELLS 1818-1897

Thomas Spencer Wells was born at St Albans the eldest son of William Wells a builder He was apprenticed to Michael Sadler a general practitioner of Barnsley in Yorkshire and later he attended the General Infirmary at Leeds



The original Spencer Wells Forceps (from the *British Medical Journal* 10th January 1874) The The instrument was made by Krohne & Sessman

Next he studied at Trinity College Dublin and he completed his undergraduate training at St Thomas's Hospital London before qualifying M R C S (Eng) in 1841 He forthwith joined the Navy and served for six years in the Navel Hospital at Malta where he was allowed to engage in civil practice in addition to his Naval duties Such good reports were received concerning his work at Malta that in 1844 he was awarded the F R C S by election His term of office at Malta being completed he left the Navy and soon afterwards settled in Brook Street London as an opthalmologist Spencer Wells had a large experience in obstetrics and when a vacancy occured in 1854 he applied and was elected Surgeon to the Samaritan

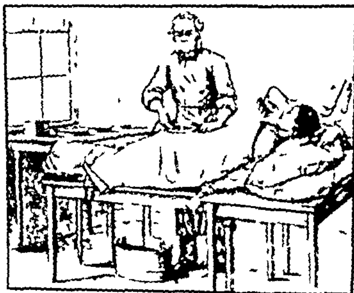
Hospital At this time the hospital consisted of only one house On the outbreak of the Crimean war he volunteered and was sent first to Smyrna and afterwards to the Dardanelles and gained great experience in gun shot wounds He returned to London in 1856 determined to apply the knowledge he had gained in abdominal wounds to the disease peculiar to women At that time oophorectomy was associated with an appalling mortality but in spite of initial failures he rose about the almost overwhelming prejudices that surrounded the performance of his operation In 1858 he performed his first successful oophorectomy In 1880 he published an account of his first 1 000 cases with a mortality of 23 1 per cent All his cases were carefully documented—failures as well as successes By his careful methods and perseverance he was able to turn the operation into one of comparative safety

Modern Spencer Wells Forceps ready for use



Spencer Wells name is perpetuated by his invention of the haemostatic forceps which bear his name Before the invention of artery forceps the fingers of an assistant were used to control bleeding during an operation Wells forceps were based upon the old artery forceps of Liston and the crude bull dogs of the famous German surgeon Dieffenbach It will be seen from the illustration that the original pattern had only one catch This idea has been improved upon and the modern instrument has three or four

Spencer Wells operation were models of surgical procedure and his operating theatre at the Samaritan Hospital was thronged by surgeons from far and near He worked in absolute silence and submitted his assistants to a rigid discipline



Spencer Wells performing an oophorectomy note the Spartan simplicity of the equipment



In 1883 Spencer Wells reached the peak of his career when he was elected President of the Royal College of Surgeons and received a baronetcy

In person Sir Spencer Wells was rather more than medium height slightly portly genial modest dignified and unassuming in manner In debate his utterances were clear positive comprehensive but not aggressive unless he was roused to self defence by personal attacks upon himself or his professional career A keen lover and a fine judge of horses he drove himself daily in a phaeton and pair from his

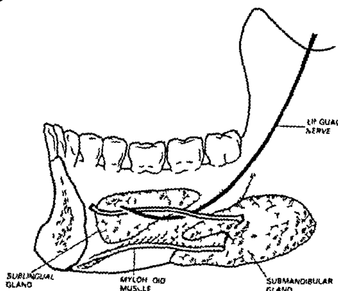
private residence (now Golders Hill Park) in Golders Green to his rooms in Uppe
Grosvenor Street He died near Cannes in 1897 and his body was cremated a
Woking



WHARTON'S DUCT

THOMAS WHARTON
1614 1673

Thomas Wharton was an eminent physician who flourished at the time of the Restoration He is remembered today for his description of the duct of the submandibular salivary gland—Wharton s Duct True this duct had been seen more than a century before by an Italian anatomist but Wharton was the first to publish a description of it



Dissection to show Wharton s Duct and the structures in relation to it (medial view)

Thomas Wharton was born at Winston on Tees he attended the universities of

both Oxford and Cambridge and acted for some time as tutor to the illegitimate son of the Earl of Sutherland

On the outbreak of war he removed to London and studied medicine under John Bathurst He obtained the degree of M D of Oxford and also that of Cambridge



The Plague of London Contemporary print 1665 (Pepysian collection Magdalene College Cambridge)

Dr Wharton was one of the very few physicians who remained in London during the whole of the outbreak of the Great Plague in 1665 He was physician to St Thomas s Hospital and King Charles II promised to appoint him his Physician in Ordinary as soon as a vacancy should occur on condition that he attended the Guards who as fast as they fell ill were sent to St Thomas s Hospital Soon after the Plague had abated a vacancy did occur but Charles with the characteristic fickleness of his nature gave the post to another

John Bathurst, 1607 1659 M D Camb and Oxford F R C P Physician to Oliver Cromwell
Samuel Pepys 1633 1703 F R S Civil Administrator of Royal Navy The Diary was written while he was a comparatively young man It includes eye witness descriptions of the Great Plague and Fire of London
Francis Glisson, 1579 1677 Sometime Professor of Medicine at Cambridge later removed to London and like Wharton was one of the small band of physician who continued to work there during the great Plague

Wharton as compensation was granted a coat of arms for which incidentally he had to pay £ 10

Wharton was a great friend of Dr Francis Glisson of Glisson s capsule of the liver frame He also had the honour of being referred to by Izaak Walton in that classic *The Complete Angler* Walton thanks the doctor for help in the historical section of his work and calls him a dear friend that loves both me and my art of angling

Dr Wharton died in harness at his house in Aldersgate Street and was buried in the Church of St Michael Bassishaw in Basinghall Street

THE WIDAL TEST

FERNAND WIDAL 1862-1929

Widal s name is known throughout [illegible] serological test for typhoid fever which he described in [illegible].

This confirmatory test is invaluable [illegible] fever which is caused by organisms of the *Salmonella* [illegible] on the agglutinating action of the patient s serum on these [illegible] suspension of any member of the group is added to a [illegible] patient s diluted blood serum The test has evolved [illegible] Widal In present-day practice at least six suspensions are [illegible] positive those members of the *Salmonella* group tha [illegible] are seen under the microscope to be grouped together [illegible] The [illegible] of the test lies in its simplicity and the [illegible] performed [illegible] with typhoid paratyphoid (A) and B [illegible]

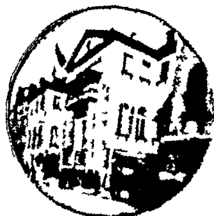
Gruber and Durham had [illegible] reaction between bacteria [illegible] reversed this procedure [illegible] of a know type and in [illegible] be identified in the [illegible] typhoid and infection by [illegible]

Georges Fernand I [illegible]

Max Gruber 1853-1927 [illegible]
Herbert Edward Dur[illegible]
diseases He served [illegible]
fever expedition to [illegible]
Having lost the [illegible]
Chemical Department [illegible]

1862 He received his medical education in Paris and by his attainments and his applications to work made his mark early in life He took his M D in 1889 and when he was 27 years of age he published a treatise on *Puerperal Infection* Laboratory work he published to him By 1895 he had climbed the hard road leading to a professorship in the Paris Faculty of Medicine At first he was Professor of Internal Pathology and later Professor of Clinical Medicine In 1896 he obtained world wide fame by the publication of his diagnostic test for typhoid

Widal s reputation does not rest upon his work alone He made other important discoveries in bacteriology and was a pioneer of anti typhoid vaccination In 1907 he segregated acquired haemolytic anaemia from the other anaemias All his work was characterised by experimental accuracy and his writings are noted for their clarity and precision



Hospital Cochin

Apart from his reputation for research Widal became widely known as a leading Paris physician and his clinics at the Hospital Cochin were thronged with pupils

Professor Widal received many honours He died from cerebral haemorrhage and was buried in the cemetery of Montmartre



THE CIRCLE OF WILLIS

THOMAS WILLIS 1621-1675

Thomas Willis was born on 27th January 1621 at Great Bedwin in Wiltshire the son of a farmer He entered Christ Church Oxford in 1636 taking the degrees of B A. in 1639 and M.A in 1642

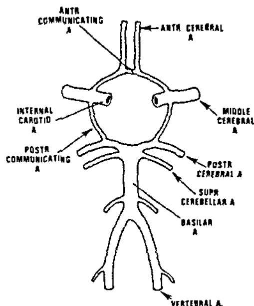
The outbreak of the Civil War found him still resident in the city of Oxford a Royalist stronghold and although he bore arms for the King he contrived to finish his medical studies In 1646 he obtained the degree of M B He took his M D in 1660 and was made an Honorary Fellow of the Royal College of physicians in 1664

At Oxford Willis was a member of a group of learned men who formed themselves into a Philosophical Clubbe for the discussion of questions of science This club was the forerunner of the Royal Society established in 1662 of which Willis became one of the foundation Fellows

In 1646 Willis commenced medical practice at Oxford At this time the city had fallen into the hands of Cromwell By the Restoration Willis s loyalty to the Royalist cause was rewarded by the Professorship of Natural Philosophy at Oxford In 1666 Dr Willis left Oxford and took a house in St Martins Lane London The reputation had acquired in Oxford stood him in good stead and before a few years had passed no contemporary physician in the whole country had a larger practice indeed never any physician before went beyond him or got more money

Willis was a man of great industry Despite his enormous practice he found time to write a number of books and to make many original observations His greatest and most enduring work in his *Cerebri Anatome* which appeared in 1664 It was

Oliver Cromwell 1599 1658 Lord Protector of England from 1653 to his death



The Circle of Willis

based on his own dissections and gave the most complete and accurate account of the nervous system which had appeared to that date

In this book he described the network of arteries at the base of the brain now known as the Circle of Willis classified the cranial nerves and first described the eleventh cranial nerve (the spinal accessory) A number of the illustrations to the book were drawn by that many sided genius Sir Chirstopher Wren who had been a pupil of Willis

Willis was the first in Europe to draw attention to the sweet taste of diabetic urine

Willis s writings although extremely verbose are valuable because of th careful clinical observations which they contain He was the first to describe and name puerperal fever and gave excellent accounts of general paralysis and whooping cough Specialists in many departments of medicine have paid tribute to the wide range of his observations and have drawn attention to the wonderful anticipations of modern knowledge contained in his books

Thomas Willis died on 11th November 1675 after a life brimful of achievement He was buried in Westminster Abbey

A yearly festival in honour of Willis is held on St Martin s day at St Martin s Church Fenny Stratford Bucks There is a sermon a dinner at the local inn and

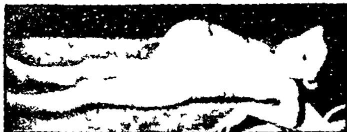
Sir Christopher Wren 1632 1723 The most famous architect England has produced St Paul s Cathedral is his best known edifice



WILMS'S TUMOUR OF THE KIDNEY

MAX WILMS 1867-1918

Max Wilms was born near Aachen the son of a lawyer He studied medicine at several German universities including Berlin and graduated M D at Bonn in 1890 For some years he was assistant at the Pathological Institute at Cologne and it was here that he carried out research on the nature of mixed tumours especially of the ovary



Wilms s Tumour

Having gained a thorough grounding in pathology he went to the famous Leipzig surgical clinic as an assistant to Professor Trendelenburg He continued his work on the pathology of mixed tumours (i e those containing a variety of different types of cells) and in 1899 published a book which cleared up much of the existing confusion about this class of neoplasm The mixed tumour of the kidney (nephroblastoma) was thenceforth called Wilms s tumour

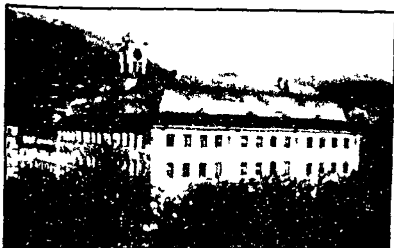
This is an extremely anaplastic tumour usually unilateral which commonly makes its appearance during the first four years of life Occasionally it affects older children and adolescents It probably originates from embryonic mesodermal tissue Under the microscope there is a mixed appearance of spindle cells epithelial tubules

and smooth or striated muscle fibres The regional lymph nodes are soon invaded and spread occurs by the blood stream to the lungs and liver



Wilms our

The tumour grows rapidly to produce a large mass in the loin Although once the prognosis was nearly always hopeless today with nephrectomy followed by radiotherapy and cytotoxic therapy long term cures may be obtained

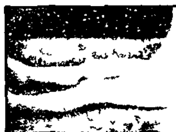


The University of Heidelberg

Advancing in Professor Trendelenburgs Clinic Wilms became successively teacher of surgery and in 1904 extraordinary professor Unlike appointments in



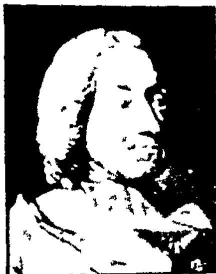
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THE FORAMEN OF WINSLOW

JACOB BENEGNUS WINSLOW 1669 1760

Jacob Benignus Winslow can justly be called the creator of descriptive anatomy His *Anatomical Exposition of the Human body* written in French in 1732 and translated into English two years later was the best treatise on anatomy between the works of Vesalius (1543) and Bichat (1801) Winslow set out to collect and confirm anatomical facts and to arrange them systematically This he did in masterly fashion

Winslow was born at Odense Denmark on 2nd April 1669 the eldest of 13 children Most of the members of his family had followed ecclesiastical careers Jacob s father and grandfather were both Lutheran ministers and it was assumed that the boy would also enter the ministry With this end in view he went through a severe course of instruction under his father who was a very learned man and then entered the theological faculty of the university of Copenhagen

Winslow's great uncle was Niels Stensen (see p 194) The example of this illustrious relative probably induced Winslow to turn from the study of theology to that of medicine

Winslow's achievements were recognised by the King of Denmark who granted him a pension in order that the country might not be without participation in the glory of advancing the progress of anatomical knowledge With the aid of this travelling fellowship he studied in Holland and then proceeded to Paris Here he became a student of the French anatomist Duverney

Andreas Vesalius 1514 1564 Professor of Anatomy successively in Padua Bologna and Pisa Marie Francois Xavier Bichat 1771 1802 Was appointed Physician to the Hotel Dieu in 1801 just before his premature death Previously he was lecturer in anatomy
Joseph Guichard Duverney 1648 1730 Professor of Anatomy Jardian due Roi Paris

the British school of medicine In Germany and many other countries professors move from one university to another While this system has its disadvantages it certainly enables a university to choose the best man from a number of candidates Thus it was that in 1907 Max Wilms became Professor of Surgery at Basle but in 1910 he removed to Heidelberg where he held the Chair of Surgery until his death in 1918

Professor Wilms was a well known surgical author He edited a famous *Textbook of Surgery* which was translated into five languages but it is the work done in his youth on the pathology of mixed tumours that perpetuates his name today



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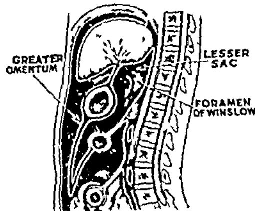
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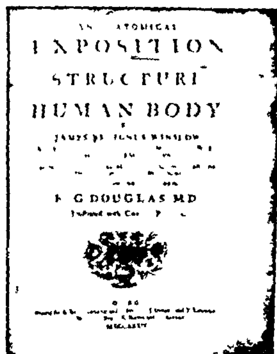
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The Foramen of Winslow


EXPOSITION
STRUCTURE
HUMAN BODY
G DOUGLAS MD

He graduated M D Paris in 1705 and continued his association with his m
So great was Winslow s ability that he deputised for Duverney in lecturi
anatomy and surgery at the Jardin du Roi In 1743 Winslow was appoint
the chair of Physick Anatomy and Surgery in the University of Paris and he
this highly important post with dignity and great distinction for 17 years

In his famous book *Exposition Anatomique de la Structure du Corps Humain* of 1732 he described the opening which connects the two sacs f the peritoneum known as the Foramen of Winslow He demonstrated the communications of the foramen by inserting a quill into this opening and then blowing air through the quill He found that the air distended the greater omentum Winslow is credited with having been the first to use the term omentum in its present sense

His name is also connected with the posterior ligament of the knee joint (Winslow s ligament) and with the whorls of capillary vessels in the choroid coat of the eye (Winslow s stars) In 1732 he described the nerve ganglia as subordinated secondary brainlets

Some years after his migration to France Winslow renounced the Lutheran faith the faith of his forebears for generations and became a Roman Catholic For this he was disinherited by his family and he never returned to the land of his birth

Winslow continued to enjoy fame and prosperity in the country of his adoption he published several books and papers between 1711 and 1742 and left an autobiographical work in manuscript which was not published until 1912 He married in 1711 Catherine Gilles and had a son and a daughter He lived to the great age of 91